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THE ROSE
ANNUAL

1929

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Notices to Members for 1929.

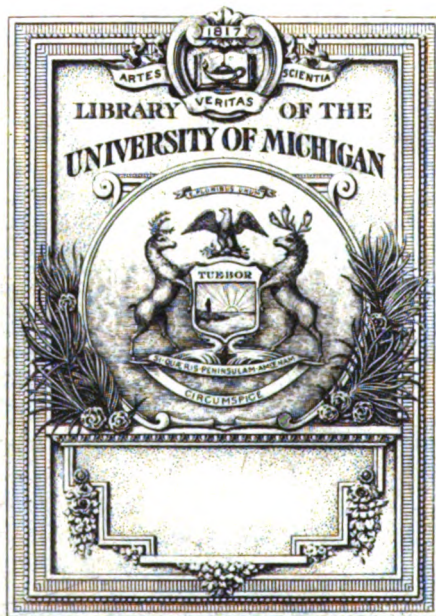
Subscriptions.—Subscriptions are due and payable on the 1st of January in each year.

Resignations.—Any Member wishing to resign must give notice to the Hon. Secretary on or before February 1st, after which date he will remain liable for his subscription.

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The Library.—Standard Books of Reference can now be loaned to Members on application to the Hon. Secretary, National Rose Society, 28, Victoria Street, S.W.1.

Trial Ground Arrangements.—See page 276.

Extra Copies of Publications.—Members can purchase for their own use **extra copies**, post free, of the *Select List of Roses and Instructions for Pruning*, price 5s., *Enemies of the Rose*, price 7s. 6d., and *Hints on Planting Roses*, price 1s., of the Hon. Secretary.

COURTNEY PAGE, *Hon. Secretary.*

February, 1929.

28, VICTORIA STREET, WESTMINSTER, S.W.1.

Telephone: Victoria 0959.

Telegrams: Natorose, Sowest, London.

21
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VERY FIBROUS YELLOW

TURF LOAM

FOR ROSES

FOR VINES

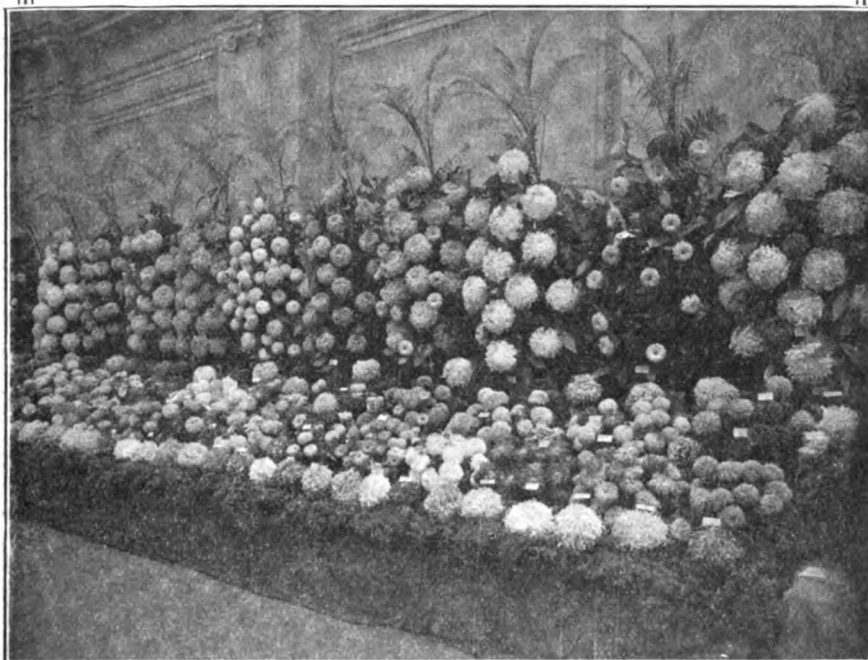
FOR CUCUMBERS

FOR MELONS

FOR CARNATIONS

FOR EVERYTHING

Champion Gold Medal Group, Nat. Chrysanthemum Soc. Show, 1923-5-6-7



WAS GROWN ENTIRELY IN OUR FIBROUS YELLOW TURF LOAM.

QUOTATIONS CARRIAGE PAID OR DELIVERED BY LORRY.

A Member of the Council of the National Rose Society writes :—

"The Roses grown in your soil have done splendidly. I have never seen such growth as they have put on the first year after planting. At twelve shows this year I took 13 Firsts, 4 Seconds, 4 Thirds, 4 Cups, 2 Salvers, 3 Silver Medals and Gold Medal."

A. B. JOHNSTON
NEW PARK, CRANLEIGH, SURREY.

SEE ALSO PAGE 285.

Known the World Over

USE FOR YOUR ROSES

And Obtain Results like this:

**AWARDED
DIPLOMA & MEDAL**

at the
**Royal International
Horticultural Exhibition, 1912.**

CASH PRICES (including bags):

SMALL (about 1 bushel)	-	3/-
LARGE (about 4 bushels)	-	7/-
5 LARGE	-	35/9
10 LARGE	-	65/-
20 LARGE	-	120/-

Carriage Paid 75 miles of London; 1/- per bag extra for distances beyond Gt. Britain

WRITE FOR CATALOGUE GIVING PARTICULARS AND LIST OF TESTIMONIALS

TONK'S ROSE MANURE

Guaranteed original formula containing NITRATE OF POTASH. Essential for feeding Roses. To be used at the rate of 4-ozs. per square yard, the time for application being March/July. A valuable stimulant previous to blooming, much of the food is slowly soluble, and will last the plants throughout the season.

PRICES (including bags):

7-lbs. 2/9 14-lbs. 4/6 28-lbs. 8/- 56-lbs. 15/- 1-cwt. 27/6

Carriage paid terms as above. 7-lbs. and 14-lbs. sent carriage paid only if ordered with other goods.

WE CAN SUPPLY EVERYTHING FOR YOUR GARDEN

GARDEN LIME, POTTING SOILS,
GARDEN ORNAMENTS, FLOWER
POTS, LABELS, STICKS, CANES,
GARDEN EDGING TILES, STRING,
NETTING, CRAZY PAVING,
WALLING STONE AND
ROCKERY STONE, ETC., ETC.

Write for Catalogue now.

**WAKELEY BROS.
& CO., LTD.**
80, Bankside, LONDON,
S.E. 1.

2, Tennison Road, South Norwood,
London, S.E.25.

Dear Sirs,—Our garden generally, and the Rose bed in particular, has been finer than for a good many years, and it is undoubtedly due to using your Hop Manure. We had a succession of Roses, and the number of blooms and the quality has drawn admiration from everybody. It was through seeing the garden of a friend and the mass of blooms that I decided to try Wakeley's Hop Manure, which I shall not fail to recommend.

(Signed) S. J. C. AIR.

Joppa House, Joppa, Midlothian.

Gentlemen,—Two years ago I was fortunate in having Wakeley's Hop recommended to me, with the most gratifying results. In a climate like this (East Scotland) it is difficult to grow Roses, but by using your famous product, I am very glad to say I had the most successful crop of Roses, both in brilliancy and number (for an amateur), which I have ever grown.

(Signed) L. RAWSON.

THE ROSE ANNUAL

FOR 1929

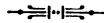
OF THE

NATIONAL ROSE SOCIETY.

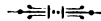
Edited by

COURTNEY PAGE

(under the Direction of the Publications Committee).



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28, Victoria Street, Westminster.)



CROYDON :

CROYDON ADVERTISER LTD., 36, HIGH STREET.

1929.

And first of all, the Rose ; because its breath
Is rich beyond the rest ; and when it dies,
It does beneath a charm to sweeten death.

Barry Cornwall.

The National Rose Society

(Founded 7th December, 1876.)

Patroness :

HER MOST GRACIOUS MAJESTY THE QUEEN.

Vice-Patrons :

H.R.H. PRINCESS MARY, VISCOUNTESS LASCELLES.

THE DUKE AND DUCHESS OF DEVONSHIRE
THE DUKE AND DUCHESS OF PORTLAND
THE DUKE AND DUCHESS OF NORTHUMBERLAND
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Auditor: CHARLES BRANNAN, Chartered Accountant, 9, King St., E.C.

Hon. Treasurer : S. A. R. PRESTON-HILLARY

Hon. Secretary :

COURTNEY PAGE, 28, Victoria Street, Westminster, S.W.1.

Telephone : Victoria 0959. Telegrams : Natorose, Sowest, London.

PREFACE.

This is the twenty-third *Rose Annual* that has been sent out, and the Publications Committee hope it will be as welcome as its predecessors.

The Papers that were read at the International Rose Conference will be found most interesting, while the Symposium on the twenty-four best Roses for General Garden Cultivation, which Mr. Darlington has so ably collated, should prove most helpful.

The warmest thanks of the Council are due to all those friends who have so kindly helped in its compilation.

THE EDITOR.

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Presidents of the National Rose Society.

- 1877-1904. The Very Rev. DEAN HOLE, V.M.H.
1905-6. CHARLES E. SHEA.
1907-8. E. B. LINDSELL.
1909-10. Rev. F. PAGE-ROBERTS.
1911-12. Rev. J. H. PEMBERTON.
1913-14. CHARLES E. SHEA.
1915-16. EDWARD MAWLEY, V.M.H.
1917-18. EDWARD J. HOLLAND.
1919-20. H. R. DARLINGTON.
1921-22. EDWARD J. HOLLAND.
1923-24. SYDNEY F. JACKSON.
1925-26. C. C. WILLIAMSON.
1927-28. H. R. DARLINGTON.
1929. ARTHUR JOHNSON.

Dean Hole Medalists.

1909. Rev. J. H. PEMBERTON.
1910. EDWARD MAWLEY, V.M.H.
1912. GEORGE DICKSON, V.M.H.
1914. CHARLES E. SHEA.
1917. E. B. LINDSELL.
1918. EDWARD J. HOLLAND.
1919. Rev. F. PAGE-ROBERTS.
1919. GEORGE PAUL.
1920. H. R. DARLINGTON.
1921. S. McGREDY.
1923. Miss E. WILLMOTT, F.L.S.
1924. SYDNEY F. JACKSON.
1925. COURTNEY PAGE.
1926. C. C. WILLIAMSON.

NATIONAL ROSE SOCIETY.

Report of the Council for the Year 1928.

The Council are gratified to be able to report further satisfactory progress. The number of New Members who have joined the Society during the year just ended being 1,752, which brings the total Membership up to 15,500.

Publications.

The *Rose Annual* for 1928 was sent out to all Members in March last. As usual there was a very large demand for this publication, and the stock in hand was very quickly exhausted. The Council desires to place on record its appreciation of the assistance which was so kindly given by friends and Members of the Society in its compilation.

The *Rose Annual* for 1929, containing a number of articles of interest to Rosarians generally, with 16 coloured and many other illustrations, will be sent out to all Members about the middle of March next. A New Edition of the Select List of Roses and Instructions for Pruning will be sent to all Members in September next.

Library.

New additions have been made to the Library at No. 28, Victoria Street, Westminster, and volumes of those works which have been most in demand have been considerably increased. The attention of the Members is directed to the conditions under which books may be had on loan. These conditions appear on page 22 of the Book of Arrangements. The Council will welcome gifts from Members of the Society of old, or standard works on the Rose or garden generally.

Lantern Slides.

The Society's Lantern Slides have become increasingly popular, and a big demand was made for them during the year. A new set has been completed and is now available. Members wishing these Slides on loan should make application at least one month in advance.

Advice to Members.

Advice on all matters connected with the Rose is gladly given to Members of the Society, and this branch of the Society's activities has been very much appreciated. Members of the Society are cordially invited to communicate with the Honorary Secretary, National Rose Society, 28, Victoria Street, Westminster, S.W.1, on any matters in connection with Rose cultivation as to which they experience any difficulty.

Shows in 1928.

Five Shows were held during the year. The Spring Show was held in the Royal Horticultural Hall on April 20th. The exhibits staged were an advance on past years in the number and quality of the blooms. As usual there was a crowded attendance of visitors during the afternoon.

The Summer Show was held in the Grounds of the Royal Hospital, Chelsea, on Friday and Saturday, June 29th and 30th. The large number and quality of the blooms staged was remarkable. As usual the Nurserymen's groups were the feature of the Show, and won the highest admiration from all visitors.

Her Most Gracious Majesty the Queen honoured the Society with a visit, greatly to the delight of a very large number of loyal Members and visitors. Her Royal Highness Princess Mary, Viscountess Lascelles, also honoured the Society with a visit, and much admired the Groups of Roses and Table Decorations. As usual the Show was thronged by a large and admiring crowd.

The Provincial Show was held at Saltaire on Wednesday and Thursday, July 11th and 12th. The weather was all that could be



THE NEW PRESIDENT,
ARTHUR JOHNSON.



desired, and a wonderful display of blooms was staged. The admirable arrangements reflect the greatest credit on all concerned.

The Show of New Roses was held in the Royal Horticultural Hall, Westminster, on Tuesday, July 24th. At this Show no less than 64 new varieties of Roses were staged. There was a very large attendance of interested visitors.

The Autumn Show was held in the Royal Horticultural Hall, Westminster, on Friday and Saturday, September 7th and 8th. The exhibits staged were of a very high order, while the lovely colourings and perfection of blooms won the congratulations of the many visitors.

Rose Conference.

The Great International Rose Conference which was held on July 2nd proved to be most interesting. Papers were read by The President, Major C. C. Hurst, Mr. J. Ramsbottom, Mr. A. Osborn, and Mr. G. M. Taylor. Large and appreciative audiences were present at both the morning and afternoon Sessions. A report of the proceedings will appear in the *Rose Annual*.

The Dinner and Outings were much appreciated by all who took part. The thanks of the Council are due to those friends who so very kindly helped to make the Conference a success.

Trial Ground for Roses.

The Society's Rose Trial Ground has been established at Haywards Heath, and already a large number of varieties of New Roses have been received from British, American, and Continental raisers. More have been promised, and no effort is being spared to make the Trial Ground a success. It is under the personal supervision of the Hon. Secretary, and every care and attention will be taken of any plants received. Awards will be made by a representative Committee of experts to Roses considered worthy. The Council would express the hope that those British Raisers who have not already done so, will send plants of their new productions without delay. Up to the present 2,030 plants have been received and planted.

Finance.

The Financial position of the Society is highly satisfactory. The total receipts for the year, including the balance of £191 17s. 7d. brought forward from the previous year, amounted to £9,817 11s. 3d., and the total payments for the same period, including the sum of £1,009 3s. 2d., which has been placed to the credit of the Reserve Fund, amount to £9,634 19s. 2d., leaving a balance at the Bankers of £182 12s. 1d. The Society has now a Reserve Fund of £11,674.

The Council has with very great regret to record the death of one of their oldest colleagues, Mr. Frank Cant, who had been a Member of the Society since its inception, and an active and loyal worker in its development. He will be greatly missed.

They have also to deplore the loss of Lord Lambourne, P.C., who was one of the Society's oldest Members.

The Council has again to thank all friends who have taken an active part in securing New Members. It is a part of the Society's work all can help in, and the Council would welcome and appreciate assistance from any Member.

The Society have to again acknowledge with gratitude the generous services of Miss Willmott, F.L.S., one of the Society's Vice-Patronesses.

National Rose Society.

Summary of Receipts and Payments for the Year Ending 31st December, 1928.

	£	s.	d.	£	s.	d.	£	s.	d.
To Balance at Bankers and in hand—									
Current Account and Cash in hand	191	17	7				2,561	3	3
Subscriptions	8,093	19	0				585	3	11
Proceeds of Shows (London) ... medals	337	14	0						
Affiliated Societies (including ... medals)	87	15	0				775	3	5
Advertisements in Society's Publications	427	8	3				39	4	0
Sale of Society's Publications	16	19	0				333	15	0
Special Prize Donations (exclusive of Plate)	10	0	0				157	16	0
Interest—									
Consols less Tax	106	4	0						
Conversion Loan 3½% less Tax	95	4	0						
Gt. Western Rly. Rent Charge	112	0	0						
Southern Rly. 5% Deb. Stock less Tax	24	0	0						
Gt. Lakes Power Co., Ltd., 6% Gold Bonds less Tax	4	18	3						
Mersey Docks 3½% Debenture Stock	42	0	0						
Metropolitan Water Board "B" Stock less Tax	7	4	0						
Local Loans 3% Stock less Tax	18	8	0						
Bank Deposit Gross	50	13	2						
LESS Income Tax on Gross Interest	460	11	5						
				451	18	5			
By Publications and Slides									
Printing, Stationery and Advertising									
Postages, Telegrams and Sundry Expenses									
Hire of Rooms and Expenses of Meetings									
Conference Expenses									
LESS amount received									
Rent, etc., Secretary's Office									
Honarium to Honorary Secretary									
Salaries and Assistance, Secretary's Office									
Auditor's Fee, 1928									
Expenses of Shows									
Chelsea Hospital									
Deposits Slides returned less received									
Prize Monies, Medals and Plate									
Special Prize Money, Guild of Blind									
Gardeners									
Trial Ground—Expenses and Capital Outlay									
Investment, Special Reserve Fund—									
£1,540 4 1 Local Loans 3% Stock									
Balance at Bankers and Cash in hand									
Current Account									
Ditto "Trial Ground"									
Cash in hand									
				182	12	1			
							£9,817	11	3

INVESTMENTS:—

Reserve Funds:		£	s.	d.
£5,309 19 2	Consols 2½%			
£3,400 0 0	Conversion Loan 3½% Inscribed Stock			
£2,800 0 0	Gt. Western Rly. 5% Rent Charge Stock			
£600 0 0	Southern Rly. 5% Debenture Stock			
£500	Gt. Lakes Power Co., Ltd., 6% Gold Bonds			
£1,500 0 0	Mersey Docks & Harbour Board 3½% Debenture Stock			
£300 0 0	Metropolitan Water Board "B" 3% Stock			
	Special Reserve Fund:—			
£1,540 4 1	Local Loans 3% Stock			

(Sgd.) S. A. R. PRESTON-HILLARY,

Hon. Treasurer.

I have examined the Books of the Society for the year ending 31st December, 1928, and hereby certify the above Summary of Receipts and Payments to be in accordance therewith. All payments have been duly authorised by the Council and Vouched The Bank Balances and the Securities representing the Investments of the Society have been verified by me.

CHARLES BRANNAN,

Chartered Accountant.

9/10, King Street, E.C.2.

14th January, 1929.

CONSTITUTION AND RULES RELATING THERETO OF THE NATIONAL ROSE SOCIETY

Title. 1. The title of this Society is "The National Rose Society."

Office. 2. The Office of the Society shall be in London at such place as may from time to time be fixed by the Council of the Society.

Objects. 3. The Object of the Society is to encourage, improve and extend the cultivation of the Rose by means of publications, the holding of Exhibitions and otherwise.

Membership. 4. The Society shall consist of members paying annual subscriptions of either 21/- or 10/6 as they may elect, and the receipt and acceptance of a subscription by the Hon. Treasurer or Hon. Secretary shall constitute the subscriber thereof a Member of the Society.

Any person desiring to commute his or her annual subscription for life may do so by making one payment of £10 10s. in lieu of an annual subscription of one guinea, or of £5 5s. in lieu of an annual subscription of half-a-guinea, and shall thereby become entitled to all the rights and privileges of the corresponding annual subscription.

No person shall be entitled to any of the rights and privileges of membership until his or her subscription for the current year has been received by the Hon. Treasurer or Hon. Secretary.

The rights and privileges of members of the Society shall be as follows :—

- (a) To receive copies of publications issued by the Society.
- (b) To exhibit, subject to the Exhibition Regulations for the time being in force, at the Society's Exhibitions and at Exhibitions held by the Society in conjunction with any local Society.

(c) To receive members' tickets of admission to the Society's Exhibitions.

(d) To vote at all General Meetings of the Society.

Subscriptions.

5. Subscriptions shall be payable on January 1st in each year. Any member desirous of relinquishing membership shall give notice thereof in writing to the Hon. Treasurer or Hon. Secretary not later than February 1st in any year, and in default of such notice such member shall be liable for the subscription for the current year.

Application of income and funds.

6. The income and funds of the Society shall be applied towards the promotion of the objects of the Society.

Executive Council.

7. The management and administration of the affairs of the Society shall, subject to these Rules, be vested in a Council consisting—

- (a) Of the officers of the Society as hereinafter defined.
- (b) Of the Past Presidents of the Society.
- (c) Of twelve acting Vice-Presidents and thirty-six other members of the Society.

The members of the Council referred to under (c) shall be elected as hereinafter provided, and shall hold office until the next annual general meeting.

Any vacancy occurring during the year (except a vacancy amongst the Past Presidents) may be filled by the Council, and such appointments shall hold good until the next annual general meeting. Twelve members of the Council shall form a quorum.

Appointment and Duties of Officers.

8. The Officers of the Society who shall be elected as hereafter provided and hold office until the next Annual General Meeting shall be the following :—

- (a) A President of the Society who shall take the chair at all meetings of the Society and of the Council. No member of the Society shall hold the office of President for more than two consecutive years or be eligible for re-election as President for two years after the expiration of any second succeeding year of his tenure of office as President.
- (b) A Deputy President who shall, in the absence of the President, preside at all meetings of the Society and of the Council.

- (c) An Hon. Treasurer who shall be the Accounting Officer, and shall be responsible for the payment into the Society's Banking Account of all moneys received by him on behalf of the Society. The Hon. Treasurer shall prepare for the Annual General Meeting a Balance Sheet and Statement of Accounts in respect of his year of office, and
- (d) An Hon. Secretary who shall be responsible for all the secretarial work of the Society, and shall be Editor of the Society's publications. The Hon. Secretary shall account to the Hon. Treasurer for all moneys received by him on behalf of the Society.

These Officers shall be *ex-officio* members of the Council and all Committees thereof.

Any vacancy amongst the officers occurring during the year shall be filled by the Council, and such appointments shall hold good until the next Annual General Meeting.

Election of Hon.
Vice-Presidents
and Hon. Life
Members.

9. Such persons as the Society may desire to honour may, on the nomination of the Council, be elected as Hon. Vice-Presidents or Hon. Life members of the Society, but they shall not as such be entitled to vote or take any part in the management and administration of the affairs of the Society.

Hon. Vice-Presidents shall hold office for one year, but shall then be eligible for re-election.

Appointment of
Standing Com-
mittees.

10. The Council shall elect, not later than the month of February in each year, from amongst its members (exclusive of *ex-officio* members) the following Standing Committees :—

- (a) A Finance and General Purposes Committee which shall certify all accounts prior to their presentation to the Council for authority for payment, and shall consider and report to the Council on all questions of finance and expenditure, and on all general matters affecting the management of the Society.
- (b) An Exhibitions Committee which shall report to the Council on all matters in connection with the Society's Exhibitions.
- (c) A Publications Committee which shall be responsible to the Council for the Society's publications.

Each Standing Committee shall consist of ten members, and shall elect its own Chairman. No member of the Council shall serve on more than two Standing Committees, excepting the Chairman of each Committee, who shall be an *ex-officio* member of each of the other Standing Committees and the officers.

Five members of a Standing Committee shall form a quorum.

The Council may appoint special Committees for special purposes. Unless otherwise directed by the Council no Committee of the Council shall have any executive powers, and no act or decision of any Committee shall be deemed to be an act or decision of the Council.

Council Meetings

11. A meeting of the Council, of which not less than seven days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Hon. Secretary to each member thereof, shall be convened so often as the Council may decide, or whenever the Hon. Secretary shall think necessary, or on a requisition in writing signed by not less than 12 members of the Council stating the purposes for which such meeting is desired.

Financial Provisions

12. The Bankers of the Society shall be Messrs. Coutts and Co., or such other bankers as the Council shall hereafter from time to time appoint. The Society's banking account shall be in the name of "The National Rose Society," and no cheques shall be drawn on the account without a resolution of the Council, which resolution shall be entered on the Minutes of the Council.

All cheques shall be signed by two of the following persons: the Hon. Treasurer, the Hon. Secretary, or the Chairman of the Finance and General Purposes Committee.

The Reserve and Special Funds of the Society shall be invested as the Council may direct in the joint names of not less than three members of the Society, who shall be nominated by the Council. Such investments shall not be varied or realised except with the authority of the Council.

Appointment of Auditor and Duties.

13. The Society shall at the Annual General Meeting appoint as Auditor for the ensuing year a Certificated Accountant, who shall hold office for one year, but shall be eligible for re-election. The Auditor shall examine and audit the books and accounts of the Society and the annual balance sheet, and shall ascertain that all payments have been duly authorised by the Council and vouched.

Exhibitions.

14. The Society shall hold one or more Metropolitan Exhibitions in each year and Provincial Exhibitions when practicable, and may also hold Exhibitions in conjunction with any other Society.

The Council shall have power to make such Regulations for the management and conduct of Exhibitions, and such Rules for judging thereat as it may think proper, and such Regulations and Rules shall be binding on all members of the Society.

None but members of the Society shall exhibit at any of the Society's Exhibitions.

**Affiliation of
Local Rose, etc.,
Societies.**

15. Local Rose, or other similar societies, which offer not less than £15 (exclusive of Challenge Cups) in prizes for Roses annually may, with the approval of the Council, become affiliated to the Society on payment of an annual subscription of 10/6 and subject to their observing the Regulations for Exhibitions prescribed by the Council. Affiliated societies shall be entitled to receive copies of the National Rose Society's publications, and to offer for competition such medals of the National Rose Society as the Council may determine.

**Nominations for
election of Hon.
and Acting Vice-
Presidents,
Officers and
Council.**

16. The nominations for election of Hon. and Acting Vice-Presidents, Hon. Life members and officers shall be made by the Council, which may also nominate members of the Society for election as ordinary members of the Council. Members of the Society may make nominations for the election of ordinary members of the Council provided that such nominations shall be signed by not less than two members of the Society and sent to the Hon. Secretary, together with the written consent of the nominee to act, not later than November 1st next preceding the Annual General Meeting.

**Method of
Election.**

17. The Hon. Secretary shall send to each member of the Society, with the notice convening the Annual General Meeting, a voting paper setting out the names of the candidates in alphabetical order.

Each member shall be entitled to as many votes as there are vacancies to be filled, but not more than one vote may be given for any candidate.

Every voting paper shall be filled in and signed by the member voting, and returned endorsed Voting Paper, so as to reach the Honorary Secretary at least five clear days

before the Annual General Meeting. The provisions of this Rule as to the mode of voting with a note as to the total number of candidates that may be voted for shall be printed on the Voting Papers, and any Voting Paper which is out of time or does not conform to this Rule shall be void.

The Voting Papers shall be handed, unopened, to the Scrutineers (not less than two in number) appointed by the President, who shall count the same and report the result of the voting to the Annual General Meeting.

A record of the attendances of members of the Council at meetings since the preceding Annual General Meeting shall be sent with each Voting Paper.

Annual General Meeting.

18. The Annual General Meeting of the Society, of which meeting not less than 14 days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Hon. Secretary to each member of the Society, shall be held in January of each year, and the order of business shall be as follows :—

- (i) Confirmation of Minutes of the last Annual General Meeting.
- (ii) Reception of Annual Report of the Council and the Hon. Treasurer's Statement of Accounts as audited by the Society's Auditor.
- (iii) Reception of the report of the Scrutineers appointed by the President.
- (iv) Election of Auditor for ensuing year.
- (v) Other general business.

Special General Meeting.

19. A Special General Meeting of the Society, of which meeting not less than seven days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Hon. Secretary to each member of the Society, shall be convened by direction of the Council, or on a requisition in writing signed by not less than 25 members of the Society stating the purpose for which such meeting is desired.

No business other than that for which the meeting has been convened shall be taken at any Special General

Meeting. All voting at such meeting shall be by members of the Society in person, and no voting by proxy shall be allowed.

Removal of
Member's name
from List of
Members.

20. All questions affecting membership or the conduct of any member of the Society shall be dealt with by the Council in its absolute discretion, and the Council may, by a majority of two-thirds of the members present and voting at a meeting convened by a notice stating that the removal of a member will be considered thereat or at a meeting specially convened for the purpose, order the removal of the name of any person from the list of members, and thereupon such person shall cease to be entitled to any of the rights and privileges of membership of the Society.

Alteration, etc., of
Rules.

21. These Rules shall not be added to, amended or rescinded except at an Annual General Meeting or a Special Meeting of the Society, and then only with the consent of not less than two-thirds of the members present and voting at such meeting.



Charlotte Knollys



FOREWORD.

It is a pleasure to write a foreword to the *Rose Annual*, which this year contains a picture of The Hon. Charlotte Knollys. She has friends in the highest and in humbler places, and we like to welcome her back into the realm of the Roses. In days gone by she often visited our Shows with her Royal Mistress, to whose service, with her colleague and friend Sir Dighton Probyn, she devoted her long life. We rejoice that she is still among us, and we wish for yet more years to be added to her old age, the noble contentment of which we all respect.

All of us care for the Roses ; they are flowers to which the most exalted and the lowliest gardeners are devoted, either in their spacious beds or in their cottage borders. Flowers never did any harm to any one, and perhaps Roses above all unite us together. Old and young love them ; little children know them by name ; and here we have Miss Knollys placing herself by the children's side in the Rose garden. This is not the only way in which her heart is still young. The young themselves know this, and feel that they may give her their confidence. May the scents and sounds and all the sweetness of the Sandringham gardens be with her to cheer her on to the border of the Land—

“ Where through the sacred ” Roses
“ With flowers on every side
The happy dear-bought nations
Go wandering far and wide.”

(*Bernard of Cluny*).

B. NORWIC :

The Palace, Norwich, 1929.

REPORT OF THE INTERNATIONAL ROSE CONFERENCE

HELD BY

THE NATIONAL ROSE SOCIETY,
at Caxton Hall, Westminster, S.W.1.
on MONDAY, 2nd JULY, 1928.

Under the Chairmanship of
Mr. H. R. DARLINGTON,
President of the Society.

THE PRESIDENT: It is my first and pleasing duty to welcome here the members of the Conference, and perhaps I may say that we are particularly indebted to our friends from overseas who have come to see us at this season. I think I ought, first of all, to mention Mr. Galczynski, who has very kindly had translated into French, and has presented to this Conference, a copy of his book, or pamphlet, on "The Rose during the Centuries." He has given us some copies for the members of the Conference, and we are much indebted to him for his kindness. I think this gathering from all parts of the world is a particularly interesting one. It shows what a great work the Rose is doing in the healing of the Western world by bringing us all together, because it is uniting men and women who are working on the same object, who have met the same difficulties, and have before them the same purpose, a common purpose which unites them in a peaceful project. It is therefore, with great pleasure that I welcome you all to-day. We have a good deal of work before us this morning, and I will not detain you now any longer, but I will ask Mr. Osborn to read his paper on the Species.

THE ROSE SPECIES.

MR. ARTHUR OSBORN (Kew): In viewing the Rose family as a whole one must be impressed with the vastness of the subject. In all the range of cultivated plants I cannot suggest one which is more extensive, more popular, or more valuable in gardens. The Rose is, without doubt, one of the most favoured flowers to-day, one may even venture to say even the most popular flower of all ages.

Though somewhat overshadowed by the richness and splendour of the hybrid garden Roses, no phase of the subject is more interesting than the species and their history in relation to the present-day races of garden Roses.

Not only are many of the species beautiful and attractive in themselves, but in their immense variations they have been cultivated for centuries by civilised nations. This has resulted in numerous garden types being evolved by ages of hybridisation and selection, for surely few, if any, families of plants cross pollinate more readily. The wild Roses have afforded in the past, and still offer, wide possibilities for breeding to improve existing varieties and originate new types.

The wild Roses are natives of the temperate and sub-tropical regions of the Northern Hemisphere.

The conception of exactly what constitutes a species apparently varies with different botanists. Most botanists appear to approximate between 100 and 200 species. Gandoger gives the number as 4,266, but many of these can be only forms and natural hybrids, for as anyone cultivating wild Roses quickly realises, few families of plants are so variable from seeds and hybridise or cross pollinate so readily. About 75 species and 80 distinct varieties are in cultivation at Kew.

The wild Roses vary immensely in stature, ranging from trailing forms and dwarf types a foot or less high to large bushes and scrambling shrubs or climbers reaching the tops of lofty trees in a wild state, and in cultivation growing through and over trees 30 to 40 feet or more in height. *Rosa moschata* is a notable example.

The charm, simple beauty and fragrance of the wild Roses may be fittingly displayed in open shrubbery borders, as specimen lawn shrubs, for hedges both as boundary fences and dividing lines or enclosures for the different sections of the garden. In small gardens, for example, to separate the flower garden and the vegetable plots. When facilities are available for planting, the wild Roses make most effective groups in the pleasure grounds and open woodland. For this purpose I commend even the Dog-Rose and Sweet Briar of the hedgerow; the last named in particular is delightfully sweet in the morning dews and after warm showers.

Many of the wild Roses have three very distinct phases of beauty.

During May and June or later when festooned with dainty red, pink, yellow or white blossoms, fleeting beauty, perhaps, but delightful and often fragrant.

The abundant hips of many species bespangle the bushes for a lengthy period in autumn and early winter.

A considerable number are distinctly ornamental in habit and leafage, attractive foliage, ornamental spiny stems and autumn colour in leaf.

Though Rosarians with small gardens cannot afford to devote much space to the cultivation of the Rose species, I venture to suggest they offer possibilities in open sunny positions to improve the character and interest of the shrubbery borders; also for hedges as substitutes for privet and laurel, compared with which they are more impenetrable, attractive and interesting.

Cultivation in Open Sunny Positions.

The cultivation of the wild Roses presents no problems to the enthusiast; they thrive in most soils which have been deeply trenched and manured. Add top spit loam when the natural soil is poor, also a little leaf-mould, wood-ash, or soot. When dealing with wet clay soils, incorporate plenty of old brick rubble and mortar from a builder's yard.

With regard to planting it may be done from early November to March, when the weather conditions are favourable and the soil in suitable condition. Choose November for preference, as the soil then still retains some of the summer heat, and we frequently have mild weather at this season, when rooting commences almost at once.

Mulching with old decayed farmyard manure, or cow manure, is beneficial in early summer. If this is not available, or in alternate years, fork in a dressing of bone meal when cleaning the ground in winter or early spring.

Propagation.

The propagation of the species and varieties of *Rosa* needs considerable care and attention to keep them true to type. No family of wild shrubs intercross more readily. Seeds from hips collected on isolated bushes may be expected to come true, but it is useless to attempt the raising of seedlings from a mixed collection of wild *Roses*. This difficulty can be overcome by isolating a few flower buds in muslin bags before they open and pollinate them when ready, or propagate by vegetative means, *i.e.*, cuttings, layering and budding.

Cuttings is in a way the simplest method, but some of the very thorny or thin wiry species, like *R. Webbiana* and *R. Willmottiae* do not produce roots at all readily. For these layering is the obvious course to pursue. Budding is occasionally practised as a means of increase, but it has the disadvantage that suckers from the stock of a vigorous, free-growing bush are not so easy to detect and cut out as in the closely-pruned garden *Roses*.

Sow the seeds as soon as ripe in pans filled with well drained sandy soil, placing them in a cool greenhouse or frame. Failing these, cover with sheets of glass and stand the pans under a sheltered wall or fence.

Insert the cuttings in a close propagating case during July, in a cold frame, or under handlights during August and September, and on a border outside in October and November.

Pruning.

Though usually referred to as pruning the actual work is more correctly described as thinning and shaping the bushes. The thinning mostly consists in removing old, worn out branches either down to the ground, or back to healthy shoots on the main stems. It is also desirable at times to shorten long shoots after flowering and fruiting which are either spoiling the symmetry of the bushes or which may be outgrowing their positions or crowding neighbouring bushes.

The thinning of the growths not only improves the appearance of the bushes, but obviously it must affect their general health through allowing light and air to reach the main branches and mature the wood.

Two periods suggest themselves when such work can best be done. After flowering, when it is seen which growths are maturing fruits, and during winter, after the beauty of the hips is past. We always endeavour to do a little of the work at both times, having a small pruning saw and secateurs available, when hoeing and cleaning during July, and again when forking among the bushes in winter.

Selections for Various Positions and Purposes in the Garden.

Specimen : Lawn Bushes.

Hugonis is an elegant rounded bush of graceful habit, 8 or 9 feet in height and more in diameter, with feathery, fern-like foliage and dainty yellow blossoms in May.

Moyesii, from 6 to 10 feet high, with lurid ruby or dark wine-coloured flowers 2 to 2½ inches across, freely borne during June and early July, followed by very showy pear-shaped red fruits 2 to 2½ inches long in autumn.

Omeiensis.—A bush 6 to 8 feet high and more in diameter, with fern-like foliage and dainty white four-petalled blossoms in May and early June, quickly followed by stumpy pear-shaped fruits, red, red and yellow or dark crimson. The variety *pteracantha* has large red translucent spines. Cut sprays with the attractive stems and foliage are valuable for decoration with cut flowers.

sericea.—A large spreading bush 10 to 12 feet high and more in diameter, with arching branches and fern-like foliage, white four-petalled blossoms in May and red fruits. An Indian species.

Sertata.—An elegant bush 4 to 6 feet high and more in diameter, dainty foliage and delicate Rose-pink blossoms in June, followed by rich red fruits.

Setipoda.—A vigorous bush 6 to 8 feet high, producing purplish-rose blossoms very freely, followed by large bottle-shaped, bristly red fruits.

Webbiana.—A Himalayan species of graceful habit up to about 6 feet high, with pale pink blossoms and bright red pitcher-shaped fruits.

Willmottia.—A very graceful Chinese shrub of rounded habit, 6 to 10 feet high, with small elegant foliage and pale purplish-rose blossoms $1\frac{1}{2}$ inches across, followed by orange-red fruits.

Wild Roses of Bush Habit for Lawn Beds and Groups in Shrubbery Borders.

hispida.—Up to 6 feet high, yellow flowers 2 to 3 inches across, one of the most beautiful single Roses, sometimes included as a variety of *spinosissima*.

Moyesii.—A dozen plants make a most attractive bed if the longest growths are shortened and old wood cut out. The lurid dark red blooms arrest attention, and are followed by a wealth of bottle-shaped fruits.

rubiginosa.—The sweet briar, erect bush with arching branches 6 feet to 9 feet high, pale pink blossoms and bright red fruits. The fragrance of the foliage is delightful on dewy mornings and after rain.

rubrifolia.—From the Alps and Pyrenees, a shrub of erect habit, 5 feet to 7 feet high, with beautiful purplish red foliage, deep red flowers and globose red fruits.

rugosa.—Often called the Japanese Rose, but is a native of China, Japan, and Corea; forms a sturdy bush 4 feet to 6 feet high, large purplish Rose flowers 3 inches to $3\frac{1}{2}$ inches across, and large bright red fruits.

spinosissima.—The Scotch, or Burnet Rose, in its very numerous varieties is a most interesting and attractive Rose for indifferent soils, three of the best varieties are *altaica* up to 6 feet high with creamy white flowers, *lutea* 3 feet or more high with buttercup yellow blooms and *myriacantha*.

Virginiana.—From Eastern N. America, 5 feet to 6 feet high, of erect habit, pink blossoms, and oval rich red fruits.

xanthina.—A very pretty yellow Rose from Persia and Afghanistan, growing 4 feet to 5 feet high, with red barked stem, attractive large flat spines and elegant foliage, suggesting some of the varieties of the Scotch Rose.

Valued for their Abundant Showy Fruits.

alpina, now called by botanists *Rosa pendulina*, a variable native of the mountains of Central and South Europe, from 3 feet to 6 feet high, has deep pink blossoms and red highly coloured pear-shaped fruits.

Canina.—The Dog Rose of British country lanes. A good form is worth cultivating in the shrubbery if not growing wild in the neighbourhood; has white or pink flowers and abundant bright red fruits.

Davidii.—A free-flowering Chinese Rose with abundant clusters of deep orange-red fruits, bushes 6 to 8 feet or more in height.

Fargesii.—A Chinese Rose with large rose-pink flowers and numberless bright red fruits; bushes 6 feet or more high.

macrophylla.—Found wild in the Himalayas and China; a shrub 8 feet or more high, with large rosy-pink flowers and long pear-shaped red fruits.

Moyesii.—If confined to one Rose cultivated for its fruits, this would be my choice. Growing 5 to 10 feet, or more, high, the large lurid, ruby-red flowers are succeeded by quantities of orange-red fruits.

Omeiensis.—A large bushy Chinese species with feathery foliage, one of the first to ripen the fruits in August. There are several varieties differing, among other things, in the colour and shape of the fruits, one with red and yellow (bicolor) fruits, and another with crimson fruits.

rugosa.—A popular Rose of bushy habit, averaging 4 to 6 feet high, with large bright red, tomato-shaped fruits.

Sertata.—A Chinese Rose of graceful beauty, with rose-pink blossoms and rich red oval fruits, bushes 5 to 6 feet high, and more in diameter.

Setipoda.—A strong growing Chinese Rose, making large bushes up to about 8 feet high, with purplish-rose flowers and large red bottle-shaped fruits.

Sweginzowii.—A vigorous Chinese Rose up to 10 feet, or more, in height, very freely armed with flattened spines, has conspicuous orange-red fruits.

Webbiana.—A Himalayan Rose with many dainty pink blossoms, followed by quantities of bright-red pitcher-shaped fruits, an elegant shrub averaging 5 to 6 feet high.

Willmottia.—A large elegant bush 6 to 8 feet, or more, high of spreading habit with orange-red fruits, attractive until Christmas or later.

Rose Hedges.

How much more attractive might the gardens be of the thousands of houses now being built over the country, if they had hedges of Roses instead of the monotonous row after row of green privet. Planted 2 to 3 feet apart, the initial cost would not be large, and being free

growing there would soon be a dense protective hedge, much more so than privet, with the added beauty of foliage, flower and fruit. These notes only concern Rose species, but obviously Rose hedges would not be restricted to these with such beautiful sorts as Zephyrine Drouhin, Gruss an Teplitz and others to choose from.

Roses for Hedges.

canina.—A walk in many country lanes in June or autumn reveals the possibilities of the Dog Rose for hedges. In cultivated and manured ground, with judicious pruning and cutting out old wood, *Rosa Canina* makes a beautiful hedge.

Davidii.—For a hedge 6 feet or so in height this Chinese Rose is deserving of consideration. Free and naturally upright in growth it has large corymbs of rose-pink blossoms, and deep rich orange red to scarlet fruits.

Moyesii.—In flower and fruit this is the most distinct and attractive of the Chinese Roses. When planting secure the form with lurid ruby or dark wine-coloured blossoms, which is best propagated by layering, as seeds do not come true and cuttings are not easy to root.

rugosa.—Naturally of sturdy, bushy habit, and some 5 to 6 feet high, the Ramenos, or Japanese Rose, is well adapted to plant, for example, as a dividing line between the flower garden and vegetable plots. It flowers and fruits very freely.

rubiginosa.—The Sweet Briar is a delightful subject for a hedge, with its upright stems, fragrant foliage, dainty pale pink blossoms and bright red egg-shaped fruits.

rubrifolia.—The name refers to the reddish colour of the leaves and young stems, which give it a very distinct and attractive appearance for a hedge 6 to 7 feet high.

Setipoda.—A strong growing Rose of sturdy habit suitable for a hedge averaging 5 to 6 feet high. It has showy purplish-rose flowers and fruits very freely.

spinosissima.—The Scotch, or Burnet Rose, is too well-known to need description, but we do not appreciate its value in its many forms for hedge-row and group planting, especially in light soils.

Roses for the Rock Garden, when a fair amount of space is available and variety of subjects an asset.

Ecæ.—A delightful Rose of elegant habit from Afghanistan, thrives on a sunny, well-drained slope, grows 2 feet or more in height, with rich, buttercup yellow blossoms.

ferox.—A dwarf compact bush of thorny appearance, a wild plant in the Crimea and Caucasus, 1 to 2 feet high, with abundant white blossoms followed by showy roundish red fruits.

glutinosa.—A dwarf shrub of compact, bushy habit, covered with glandular hairs or bristles, a native of the Orient; the white flowers are followed by egg-shaped, bristly dark-red fruits. The plants average 18 inches high.

humilis.—The Pasture Rose of Eastern North America, 1 to 2 feet high, with pink blossoms, and attractive red fruits in autumn.

indica.—A very variable plant, several dwarf forms are valuable in the rock garden, being in flower from June to October or later. The variety *minima* or *pumila*, the Fairy Rose is a little gem for rockery slopes a few inches high with clusters of pink blossoms.

nitida.—A low bush rarely more than 2 feet high, the orange red and gold of the leaves in autumn is most attractive. The bright, rosy-red blossoms up to 2½ inches across are followed by globose scarlet fruits. An interesting species from Eastern North America.

sicula.—A close growing bush with stiff, flattened spines, height 1½ to 2 feet, bright rose flowers and fruits at first red, then black, rather larger than peas. It is quite an interesting European Wild Rose.

Wichuraiana.—The parent of the many beautiful hybrid *Wichuraiana* climbing Roses, makes long trailing shoots which are delightful,

hanging over stone ledges in the rock garden, the dark green foliage is studded with clusters of white blossoms in August, the growths, though only rising a few inches from the ground, often trail a length of 6 feet or more.

Robust Growing Roses for Wide Borders, the Wild Garden and Open Woodland.

arvensis.—The Ayrshire Rose, a British hedge-row Rose of distinctive beauty with long trailing slender branches, attractive white blossoms and dark red oval fruits. Support with rustic poles, or trail over vigorous shrubs.

Helena.—A Chinese Rose of vigorous habit up to about 18 feet in height, producing in late June and early July large corymbs of white, fragrant blossoms, followed by clusters of orange-red fruits.

moschata.—The Musk Rose, widely spread in a wild state from South Europe to India, a tall rampant climber, delightful to trail up and through the branches of trees. At Kew a plant has reached the top of a holly 35 feet high, half covering it in late June and early July with masses of musk-scented white blossoms. Another plant has spread through a cedar tree, and in flower is particularly effective against the rich green foilage.

multiflora.—Wide-spreading bushes 12 feet to 15 feet high, clothed in June with large branching panicles of white blossoms. A native of North China, Corea and Japan, the parent of the Polyantha section of climbing Roses.

sericea.—A Rose with four petals from Northern India, grows up to 12 feet and more in diameter, with attractive fern-like foliage, white flowers and bright red fruits.

Soulieana.—A very vigorous and free-growing Rose from China, up to 12 feet or more in height, and eventually much more in diameter, formidably armed, the leaves rich grey-green, and in July producing abundant corymbs of creamy-white blossoms followed by orange-red fruits; succeeds in poor soils and makes a formidable screen.

GENETICS OF THE ROSE.

MAJOR C. C. HURST: Since the War I have devoted myself to a study of the genetics of the Rose. A comprehensive collection of the known species, sub-species and hybrids has been got together in the Cambridge Botanic Garden from various sources, including wild species collected by my wife and myself in England and in five cantons of Switzerland, together with plants raised from seeds sent to me by correspondents and travellers in North America, Mexico, Turkestan, Siberia, China and Japan. Amongst these I am particularly grateful to Professor T. D. A. Cockerell, of Colorado, who has been most assiduous and generous in collecting, pickling and preserving for me specimens of wild species of *Rosa* in his various expeditions to Siberia (Lake Baikal), Russian Turkestan, Manchuria, and other remote places. Professor Cockerell has also sent me living plants of the rare American Rose, *Hesperhodos minutifolia* sub-species *stellata*, which are now doing well in the Botanic Garden at Cambridge, and so far as I know are unique in Europe.

Professor R. Ruggles Gates, of King's College, London, has also been good enough to collect seeds of Wild Roses for me in Russian Lapland, north of the Arctic Circle, and also from the Mackenzie River district in Canada, south of the Arctic Circle.

Dr. Eileen Erlanson, of the Michigan Botanic Gardens, who has made a special study of North American Rose species and varieties, has generously sent me a large number of seeds and specimens collected in Michigan, as well as some interesting seeds of Roses from Alaska.

Many plants have been raised at Cambridge from the seeds of these collections, and it is already evident that this material will help to

solve the important problem of the distribution and status of the octoploid, hexaploid, tetraploid and diploid forms of the polymorphous species formerly included under the common name of *R. acicularis*.

Dr. Heslop Harrison, who has made a special study of British Roses, has from time to time kindly sent me seeds and cuttings of interesting Roses from co. Durham.

I am much indebted to the Directors of the Botanic Gardens at Kew, Oxford, Cambridge and Basel, to Colonel Gravereaux of La Roseraie de l'Hay, Paris, and to Dr. Mary Carew-Hunt (who kindly allowed me to select 80 specimens from the collection of the late Canon Carew-Hunt at Albury, Oxford) for free access to their collections in obtaining my material. I wish also to acknowledge the facilities allowed me in my work in the Botanic Garden at Cambridge by Mr. H. Gilbert-Carter (Director), Mr. F. G. Preston (Superintendent), and Mr. Reginald Cory (Benefactor), all of whom have gone out of their way to help me to secure land, labour, and valuable material. My best thanks are also due to Professor A. C. Seward and Mr. F. T. Brooks, of the Botany School, and Professor Stanley Gardiner of Cambridge, for the laboratory accommodation necessary for the preparation of cytological material, and for microscopical research.

In the examination of herbarium specimens at the British Museum and the Linnean Society of London, I am much indebted to Dr. A. B. Rendle, Miss Willmott and Mr. Baker, and also to the late Dr. Daydon Jackson, whose loss we deeply deplore. Lastly, I owe to my wife all the drawings, photographs, paintings and herbarium specimens collected during the last six years, as well as a considerable amount of assistance in genetical experiments, laboratory work and microscopical researches.

The Rose material has been analysed in three different ways in accordance with the methods of three different sciences: Taxonomy, Genetics, and Cytology.

First.—About 100 characters of each species, sub-species and variety have been examined and tabulated.

Second.—Numerous experimental crosses have been made between various species, sub-species and varieties and the results recorded and tabulated. Many known hybrids have also been analysed.

Third.—The chromosomes of 674 species, sub-species, varieties and hybrids have been examined and counted in various stages in both body-cells and germ-cells under high-powered microscopes.

The results of these combined experiments and researches have proved to be of considerable importance, and in many cases surprising, and quite unexpected results have been obtained. I fear that several large volumes will be required to record the results already secured, and so far as one can see we are yet merely on the threshold of important results to come.

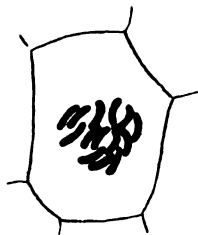


FIG. 1 (a).

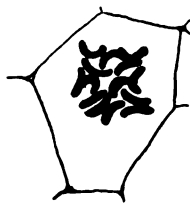


FIG. 1 (b).

Diploid Roses with 14 chromosomes in body-cells and seven in male and female germ-cells.

- (a) Fourteen chromosomes in body-cell of the old Pink China Rose (AA). (See pages 40 and 47.)
- (b) Fourteen chromosomes in body-cell of the Polyantha Pompon Rose "Eblouissant" (AA). (See page 41.)

The most important results have come from the counting of the chromosomes. A Rose plant, like other plants and animals, is made up of millions of minute cells, which form the various tissues. Each cell contains a round, central body known as the nucleus. Each nucleus contains a number of microscopical rod-like bodies which stain rapidly with chemical dyes, and for that reason are called chromosomes. These chromosomes carry the Mendelian factors, or *genes* as we now call them, which differentiate the various characters of the Rose. In the body-cells the chromosomes usually consist of pairs, one of which came

from the male parent and the other from the female parent. In the male and female final germ-cells (gametes) the chromosomes are single, so that a pollen-nucleus and an egg-nucleus carry usually one-half the number of chromosomes that are contained in the body-cells. When fertilisation takes place the two singles come together and make a pair of chromosomes. As an illustration of how this works in a given case, we will take two well-known Roses and cross them together. The female parent is *multiflora* from Japan, with Tall Summer-flowering stems and Single White flowers. The male parent is *chinensis* from China, with Dwarf Perpetual-flowering stems and Semi-double Pink flowers. Each parent has seven pairs of chromosomes in its body-cells and seven single chromosomes in its germ-cells. From experiments we know that the Mendelian gene for Tall Summer-flowering stems is located in one chromosome of the seven present in the egg-nucleus of *multiflora*, while the gene for Single flowers is located in a second chromosome, and the gene for White flowers is located in a third chromosome.

Similarly the gene for Dwarf Perpetual-flowering stems is located in one chromosome of the seven present in the pollen-nucleus of *chinensis*, while the gene for Double flowers is located in a second chromosome, and the gene for Pink flowers is located in a third chromosome. After fertilisation the cells of the hybrid contain seven pairs of chromosomes, seven from each parent. The chromosome carrying the gene for Tall Summer-flowering from *multiflora* pairs off with the chromosome carrying the gene for Dwarf Perpetual-flowering from *chinensis*, as do the two chromosomes carrying genes for Single and Double flowers, and the two chromosomes carrying genes for White and Pink flowers. The resulting hybrid produces Tall Summer-flowering stems with Semi-double Pink flowers, since these characters are dominant while Dwarf Perpetual-flowering stems and Single White flowers are recessive. When the germ-cells of the hybrid are formed the seven pairs of chromosomes are reduced to seven singles. Since this reduction is a random one the hybrid produces eight kinds of pollen-cells and eight kinds of egg-cells, so far as these three characters are concerned. Consequently when the hybrid is selfed, in accordance with the Second Law of Mendel, we get on the average once in 64 times, a Dwarf Perpetual-flowering Full-double White Rose with the mixed characters of *multiflora* and *chinensis*.

Such was the origin of the Polyantha Pompon Rose "Paquerette," raised by M. Guillot in 1873, which introduced a new race of Roses to our gardens. (Fig. 1b.)

The chromosomes in Roses, as in other plants and animals, are relatively constant in size, shape and number for any particular individual. In the five genera of the Rose tribe there are minor differences in size and shape of the chromosomes, but in *Rosa* proper all the chromosomes are relatively the same in size and shape, though they differ remarkably in number. Six different types have been found with 14, 21, 28, 35, 42 and 56 chromosomes respectively in the body-cells. The interesting and important point is that all these numbers are multiples of seven. In the formation of the germ-cells and at certain other times the chromosomes may be seen working in sets of seven, or septets, as we call them. To cut a long story short, our genetical experiments at Cambridge have demonstrated that in *Rosa* proper there are five distinct septets or sets of seven chromosomes, which we distinguish as A, B, C, D, and E septets. Each septet of chromosomes carries a different set of genes, representing at least 100 specific, sub-specific and varietal characters. From this it follows that there are five fundamental species in the genus *Rosa* of Linnaeus, and that all the other species of this genus consist of various combinations of the chromosomes and characters of these five fundamental species. The five fundamental species are called diploids, because they contain two septets of chromosomes in their body cells; other Roses are called polyploids because they contain more than two septets. Triploids contain three septets, tetraploids four, pentaploids five, hexaploids six, and octoploids eight septets of chromosomes in their body-cells.

The first fundamental septet species which carries a pair of A septets of chromosomes is *Rosa sempervirens* (the oldest selected name) and its sub-species include *arvensis*, *moschata*, *phoenicea*, *abyssinica*, *Pissartii*, *Brunonii* (Fig. 8b and Pl. Ib), *Leschenaultiana*, *longicuspis*) with its variety *lucens* (Pl. Ia), *gigantea* with its offspring *odorata* (the Tea Rose), *Soulieana*, *Helenae*, *Rubus*, *Gentiliana*, *laevigata* (with its offspring *sinica* *Anemone*), *Banksiae*, *microcarpa*, *chinensis* (with its offspring the Pink and Crimson Chinas), *anemoneflora*, *cathayensis* (with its offspring Crimson Rambler), *multiflora*, *Wichuraiana* (Fig. 7a), *Luciae*

Watsoniana, *rubrifolia*, *setigera* and several new sub-species from China found at Kew and Cambridge in Mr. Cory's seedlings.

The AA septet species is distinguished by its climbing stems, sinuous recurved branches, stout dilated hooked to inclined prickles, uniformly narrow stipules with reflexed margins, petioles with stout curved pricklets, compound flowers placed on erect branchlets, narrow bracts, reflexed and deciduous sepals, petals with musk-Rose fragrance, disc broad and fleshy with contracted orifice, elongated exserted and thread-like styles arranged in a column, late-ripening fruits with 3-4 tiered achenes. The sub-species differ from one another in major alternative characters, but as a whole intergrade and are linked up with one another. These also differ from one another in their habitats and range of distribution, and have many Mendelian varieties. In some cases the sub-species overlap, but usually they occupy distinct geographical areas.

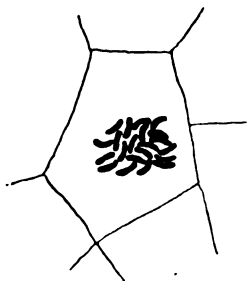


FIG. 2 (a).

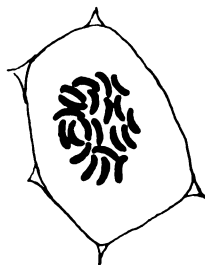


FIG. 2 (b).

Triploid Roses with 21 chromosomes in body-cells, 14 in female germ-cells and seven in male germ-cells.

- (a) Twenty-one chromosomes in body-cell of the old Crimson China Rose (AAA). This variety is still cultivated in China. (See page 46.)
- (b) Twenty-one chromosomes in body-cell of a French Cabbage Rose (AAC). In this variety a C septet of chromosomes has been lost from the old Cabbage Rose (AACC), causing a predominance of the A septet characters. (See page 49.)

The AA species is spread over the temperate and tropical regions of the Northern hemisphere from Western Europe, North Africa and Asia to the Western and Eastern States of North America in sunny and sheltered situations.

The second fundamental septet species which carries a pair of B septets of chromosomes is *Rosa sericea* (the oldest name), and its sub-species include *cabulica* (usually mislabelled *Beggeriana* in gardens), *Ecae*, *Webbiana*, *omeiensis*, *sertata* (Fig. 7c), *Willmottiae*, *Hugonis* (Pl. IIa), *xanthina* (of American gardens, not the one in British gardens which is a tetraploid *ochroleuca* with B and D septets), *gymnocarpa* and a new sub-species found at Cambridge. The BB septet species is distinguished by its rigid inclined stems, rigid shortnoded right-angled branches, stillettiform or compressed winged prickles, leaves crowded in axillary tufts, stipules narrowed to base, leaflets small to minute, base and apex rounded with broad apical teeth, flowers solitary (or rarely 1-4) wreathed on short lateral branches, bracts absent or rare, sepals erect and convergent in fruit, disc narrow and thin, petals with fruity or foetid scent, styles loose and contorted, fruits early-ripening and deciduous.

The BB species is distributed usually in exposed dry places from West to East in Asia and Western North America, none having been found in Europe, Africa or Eastern North America.

The third fundamental septet species which carries a pair of C septets of chromosomes is *Rosa rugosa* (the oldest name) and its sub-species include *coruscans*, *nipponensis* (Pl. IIb) (not *acicularis nipponensis* of gardens which is a tetraploid), *nitida* and two new sub-species found at Kew and Albury.

The CC septet species is distinguished by its thickset glandular bristly stems, spreading tortuous glandular bristly branches, prickles skewer-shaped to glandular bristles very unequal, leaves terminal crowded on surface of bush and early deciduous, stipules broad and clasping, flowers terminal on surface of bush, bracts oval to orbicular and clasping, sepals crown-like in fruit, petals with Old Rose fragrance, disc narrow and thick, styles crowded in curved sheaf, fruits with achenes two to three tiered placed on central cone and around the inner walls.

The CC species in its distribution is confined to the cold and foggy sea coasts of North Eastern Asia and North Eastern North America, none having been found in Europe, Africa, Western Asia or Western North America.

The fourth fundamental septet species which carries a pair of D septets of chromosomes is *Rosa carolina* (the oldest name) (of Linnaeus 1753, not his species of 1762 which is in part a tetraploid with A and D septets) and its sub-species include *cinnamomea* (Fig. 9a) of Linnaeus 1759 (not his species of 1753, which is a tetraploid with D and E septets) *davurica*, *Marettii*, *pisocarpa*, *Woodsii* *Fendleri*, *foliolosa*, *blanda* (Pl. IVa) and several new sub-species raised from seeds collected in North America.

The DD septet species is distinguished by its running erect slender stems, twiggy acute-angled branches, slender curved awl-shaped to straight needle-like prickles, terminally tufted leaves, flat to inrolled stipules (lower narrow and upper dilated), margins of leaflets undulate, upper teeth deep, flowers in close clusters scattered in axillary or terminal tufts, bracts concave oval crowded and leafy, sepals thin with deciduous tips, petals with spicy fragrance, disc obscure with wide orifice, styles short and straight, fruits rapid-ripening walls thin with hollow upper chamber.

This species is widely distributed in a more or less continuous area in cold and wet places in the North temperate regions of the northern hemisphere. It is more numerous in North America, where the sub-species overlap and produce natural crosses freely.

The fifth fundamental septet species is *Rosa macrophylla* (the oldest name) (Fig. 8a, Pl. IVb) and its sub-species include *corymbulosa*, *Giraldii*, *elegantula*, *persetosia* and two new sub-species from China found at Kew.

The EE septet species is distinguished by its straight and cany stems, drooping and sub-heliotropic branchlets, dagger-shaped ascending prickles, serpentine leaves with early deciduous leaflets, stipules with swollen base and dilated tips, leaflets with prominent and sub-parallel veins beneath, flowers heliotropic on drooping branchlets, bracts lance-shaped to egg-shaped long pointed, sepals erect and connivent in fruit with convex fleshy base forming the rim of the fruit, petals with faint fragrance, disc broad and thin concave in fruit, styles elongated included erect and stout, fruits elongated with neck and rim.

This species is apparently confined in its distribution to the Himalaya and Central China, and is usually found in wet and warm places. It is hardy in sheltered gardens in England, and there is a fine old specimen in the Botanic Garden at Cambridge.

POLYPLOID ROSES.

The other species of *Rosa* are polyploids with more than two septets of chromosomes, and these are all made up of various combinations of the chromosomes and characters of the five fundamental diploid species. Two distinct kinds of polyploids have been found in Roses.

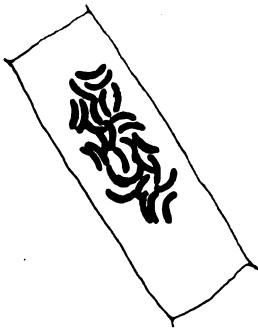


FIG. 3 (a).

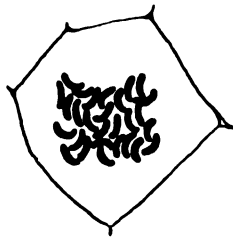


FIG. 3 (b).

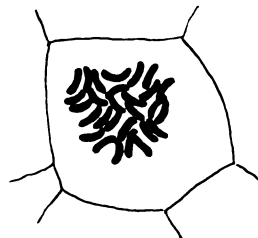


FIG. 3 (c).

Regular Tetraploid Roses with 28 chromosomes in body-cells and 14 in male and female germ-cells.

- (a) Twenty-eight chromosomes in body-cell of the old Cabbage Rose (AACC).
- (b) Twenty-eight chromosomes in body-cell of the Pompon Burgoyne Rose (AACC).
- (c) Twenty-eight chromosomes in body-cell of the Pompon Moss Rose (AACC).

(See page 49.)

(1) **Polyploid varieties** of diploid species in which the septets of chromosomes have been reduplicated. These polyploid varieties have one or two septets of chromosomes more than the diploid species to which they belong, but their specific characters are identical, showing that their original chromosome complement has been reduplicated. For example: Polyploid varieties of the AA diploid species have AAA (triploid) or AAAA (tetraploid) septets of chromosomes.

(2) **Polyploid Species** in which the septets of chromosomes are differential. These are distinct species, differing from one another by one or more differential septets of chromosomes and characters. For example, the septets of chromosomes of one tetraploid species are AABB while those of another tetraploid species are CCDD, and so on through all the possible combinations of the five septets.

POLYPLOID VARIETIES.

So far 21 polyploid varieties have been found in Roses, five tetraploids and 16 triploids. It is remarkable that all these are cultivated forms that have arisen in gardens. None has yet been found in a wild state. The old garden Rose Gloire de Dijon is a tetraploid variety of the Tea Rose with AAAA septets of chromosomes, and other tetraploid varieties are Mme. Alfred Carrière and Red Letter Day. A giant form of *cinnamomea* which I found in the garden of the late Canon Carew-Hunt at Albury, nr. Oxford, is a tetraploid variety of the diploid species *Rosa carolina* sub-species *cinnamomea* (DD) (Fig. 9a) with DDDD septets of chromosomes. A giant form of *Rosa macrophylla* was found in a garden at Khiva, and is known as var. *Korolkowii* (Pl. V, a & b). This is a tetraploid variety of the diploid species *Rosa macrophylla* (EE) (Fig. 8a & Pl. IVb), and has EEEE septets of chromosomes. There is a plant of this at Kew and another at Cambridge from Albury, and my material has been obtained from both of these plants.

From the horticultural point of view, this form with large flowers, fruits and leaves is a great advance and although the plant is a giant form in the size of its parts, it is no taller than the ordinary diploid species.

The 16 triploid varieties of Roses so far found all belong to the AA diploid species.

Eleven of these are forms of the old Crimson China Rose (*semperflorens*) whose seedling descendants have apparently remained triploid with AAA septets of chromosomes, since its introduction from China in 1791 (Fig. 2a). The original form figured by Curtis in the Botanical Magazine of 1794 is identical with some of the triploid forms of the Crimson China found in gardens to-day. Judging by Wilson's specimen

No. 3611, collected in a garden in Western Hu-peh these triploid varieties are still cultivated in China.

In the course of my researches I have found a curious case in this triploid (AAA) in which a whole septet of chromosomes has been thrown out of the nucleus of a body-cell, leaving it diploid (AA).

Among my material from La Belle Roseraie de L'Hay, Paris, there is a climbing China Rose with single red flowers which closely resembles the wild specimens of *chinensis* collected by Prof. Henry in Western Hu-peh (No. 1151) in his expedition of 1885-1888. On examination I found that this is a diploid form (AA) with fourteen chromosomes in the body-cells and seven in the male and female germ-cells. Twelve garden forms of *chinensis* examined prove to be diploids (AA), including the original plant of the Old Pink China introduced from China about 1789 (Fig. 1a) and the Green China Rose (Fig. 7b).

Of the remaining five triploid Roses (AAA), four belong to *chinensis* and one (Lady Hillingdon) to the Tea Roses (*odorata*). The original Pink Tea Rose (*odorata*) with double flowers introduced from China in 1809, and its yellow variety introduced in 1826, are still cultivated in Western Yunnan, China. Four forms, immediate descendants of these, have been examined and prove to be diploids (AA) with 14 chromosomes in the body-cells and seven in the male and female germ-cells. An analysis of their characters leads one to presume that the garden Tea Roses (*odorata*) were originally derived from crossings of Dwarf Double Perpetual flowering forms of *chinensis* with *gigantea*, both of which grow in Yunnan. Mendelian segregations in later generations of this cross would be expected to give the various forms and colours found in the Tea Roses. In such Roses as Jaune Desprez, Gloire de Dijon, Maréchal Niel and Niphetos it is easy to trace the characters of the ancestor *gigantea* and its yellow form *macrocarpa*. In view of this, it would be well worth while for Rose breeders to repeat these crosses with *gigantea*, using the more highly developed modern Roses. Some of these first crosses have recently been raised on the Continent and elsewhere, but it is important to realise that the first crosses will be Summer-flowering like *gigantea*, and that Mendelian segregation will not be evident until the second generation of breeding, when the true Perpetual-flowering will appear along with many other happy recombinations of form, texture, colour, fragrance and habit of growth.

POLYPLOID SPECIES.

So far all the wild polyploid Roses examined are polyploid species or hybrids with differential septets of chromosomes made up of various combinations of the chromosomes and characters of the A, B, C, D, and E septets. At least two distinct types of polyploid species may be recognised :—

- (1) Regular polyploid species with paired chromosomes.
- (2) Irregular polyploid species with both paired and single chromosomes.



FIG. 4 (a).

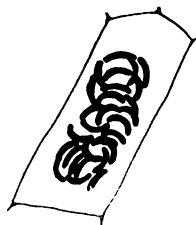


FIG. 4 (b).

Irregular Tetraploid Roses with 28 chromosomes in body-cells, 21 in female germ-cells and seven in male germ-cells.

- (a) Twenty-eight chromosomes in body-cell of *R. pomifera* (CDER).
- (b) Twenty-eight chromosomes in body-cell of *R. rubrifolia* (ADDE).

(See page 58.)

REGULAR POLYPLOID SPECIES.

Since there are five differential septets A, B, C, D, and E, 26 regular polyploid species are possible, namely 10 tetraploids, 10 hexaploids, five octoploids and one decaploid. Of these 18 have so far been identified, namely nine tetraploids, seven hexaploids and two octoploids. These regular polyploid species are distributed in the Arctic and temperate regions of the Northern hemisphere and the most polyploid species (octoploid) are circumpolar so far as critically known.

REGULAR TETRAPLOID SPECIES.

Regular Tetraploid species with four septets are :—

Rosa Huntii, a new species from China, with a pair of A and a pair of B septets. This AABB species with 28 chromosomes in its body-cells and 14 in its male and female germ-cells was received by the late Canon Carew-Hunt from a missionary in China, but its precise habitat is unfortunately unknown. The plant, now in the Cambridge collection, well combines the characters peculiar to the A and B septets of chromosomes.

Its small flowers and fruits and sub-fœtid scent are not very attractive as a garden plant, but its large stout wing-shaped prickles and tall habit of growth make it a striking figure in the landscape, especially in winter time.

Rosa centifolia, the oldest Rose in cultivation, with a pair of A and a pair of C septets (Fig. 3a), has numerous sub-species, including *damascena*, *gallica*, *provincialis*, *pumila*, *parvifolia* and *Pomponia* (Rose de Meaux).

Sixty varieties of the type and its sub-species have been examined, including a number of garden Roses with double or semi-double flowers belonging to the Hybrid Perpetual, Gallica, Pompon (Figs. 3b & c), Cabbage and Moss Rose types. All are tetraploids (except one of the French Cabbage Roses, which is a triploid) with four septets of chromosomes (AACC) in the body-cells and two septets (AC) in the male and female germ-cells. All combine the characters peculiar to the A and C septets in various ways causing much variation. Genetic experiments show that the gene for mossing or compound glands in the Old Pink Moss Rose is a Mendelian dominant located in one of the chromosomes, but not in the other of the pair. The triploid French Cabbage Rose has in some way lost one of its C septets of chromosomes, leaving it AAC (Fig. 2b). The typical form of the tetraploid species (AACC) was already in cultivation at the time of Theophrastus, about 350 B.C., and was known to him by the same name, *Rosa centifolia*; it is still cultivated for its petals, which are made into Rose Water in France, Bulgaria, Persia and India.

Rosa palustris, with a pair of A and a pair of D septets with its sub-species *corymbosa*, *Hudsoniana*, *humilis grandiflora* (of gardens) and in part *carolina* of Linnaeus 1762 (not 1753).

Rosa Davidii (Pl. VII *a*, *b* & *c*) with a pair of A and a pair of E septets and its sub-species *setipoda*, *roseo-Moyesii*, *Fargesii*, and *crasse-aculeata*.

The AAEE species is represented by some interesting forms recently introduced from Central China, all of which are worth planting in the Wild Rose garden. The type is distinguished by its graceful habit, handsome foliage, and clusters of drooping fruits.

Rosa spinosissima (Pl. VIII*a*) with a pair of B and a pair of C septets and its sub-species *scotica*, *myriacantha*, *Ripartii* and *hispida* of Sims (not some *hispida* of gardens, which are hybrids).

The BBCC species has been represented in gardens for upwards of a century by the white, yellow and pink Scotch Roses.

Unfortunately its botanical history has been confused since the time of Linnaeus with the following species, which is BBDD.

Rosa pimpinellifolia, with a pair of B and a pair of D septets and its sub-species *hemispherica*, *lutea*, *lutescens*, *Verborgei* (Fig. 9*b*), *ochroleuca* (Pl. IX, *a* & *b*), *altaica* with its var., *grandiflora* (Pl. VIII, *b* & *c*), and *Rapini*.

The species BBDD includes a number of old cultivated Roses, including that well known bud-sport of *lutea* called "Austrian Copper," with its petals of two colours (red above and yellow beneath) a predecessor of the modern bicolor Rose Queen Alexandra. The BBDD species has a wide distribution from Wales to the Caucasus, Mongolia and Northern China.

It has been much confused by travellers and collectors with the former species BBCC, but those who have seen the BBCC species *spinosissima*, growing wild on the sand dunes of the coasts of England and France, and the BBDD species *pimpinellifolia*, growing on the Jura Mountains in Switzerland, will at once appreciate the distinctness

of these two species. The habits of growth, habitats and distributions of these are fundamentally different, though since both species have 14 BB chromosomes in common about one-half of their characters are identical.

Rosa multibracteata, with a pair of B and a pair of E septets and its sub-species *reducta* and *bella*.

Rosa virginiana (= *lucida*), with a pair of C and a pair of D septets and its sub-species *baltica*, *suffulta*, *Lunellii* and *saturata*.

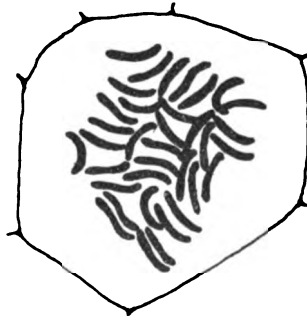


FIG. 5.

The pentaploid species *R. Froebelii* (ACDEE) from Kurdistan with 35 chromosomes in a body-cell (seven in the male germ-cells and 28 in the female germ-cells). This species is known in nurseries as *R. laxa*, though it is not the *R. laxa* of Retzius, which is a tetraploid DDEE, or of Lindley, which is a diploid DD.

(See pages 57 and 58.)

The CCDD species is represented by the *R. lucida* (Fig. 8c) of gardens, and is widely distributed in North America. The form *baltica* is apparently naturalised in Western Europe on the German shores of the Baltic, and at the mouths of the Elbe and the Loire.

Rosa pendulina (= *alpina*) (Pl. VI, a & b), with a pair of D and a pair of E septets, and its sub-species *pyrenaica*, *laxa* of Retzius (not of Lindley nor the garden *laxa*, which is a pentaploid), *oxyodon*, *lagenaria* and *intercalaris*.

The DDEE species has a wide distribution in the Alpine regions of Europe, from the Pyrenees to the Carpathians. In Asia it extends to

the Caucasus, Turkestan and Mongolia. I have not yet been able to identify it positively in either China or North America, though I suspect that Tackholm's tetraploid forms of *R. blanda* belong here. I have studied this species closely in five cantons of Switzerland, and have collected at least 20 distinct varieties there. I found that this species grows in a peculiar habitat, and only at altitudes between about 3,000 and 6,000 feet above sea-level. In gardens early in the nineteenth century this species was often confused with *cinnamomea*. (Cf. The Boursault Rose (AD)).

REGULAR HEXAPLOID SPECIES.

Regular Hexaploid species with six septets are comparatively rare, only 33 being found out of 1,006 examined.

Rosa Wilsonii, with a pair of A, B and C septets.

The AABBC species is a native of North Wales, North Ireland and Scotland, and we owe its determination as a regular hexaploid to the researches of Dr. Kathleen Blackburn and Dr. Heslop Harrison.

These authors give good reasons in support of the theory that this species arose as a natural hybrid between *R. spinosissima* ♀ (BBCC) and *R. tomentosa* ♂ (AACDE). The female germ-cells would carry in this case BC septets, while the male germ-cells would carry the A septet only, as we know from experiments. The resulting hybrid would be a triploid ABC, which by a duplication of its chromosomes, known to occur in many cases, would produce the regular hexaploid species, AABBC. In this way a new species would arise by hybridisation. This creation of new species may be going on at the present time, though it seems strange that so far no triploid forms have been found in a wild state.

Rosa manca, with a pair of A, B and D septets, a species from the Rocky Mountains of North America.

Rosa Moyesii, with a pair of A, B and E septets.

The AABBE species is well known in gardens, with its large, persistent and conspicuous dusky red flowers and its long handsome scarlet-red fruits and graceful foliage (Figs. 6a, 9c, Pl. XI, a & b). It is a native of Central China, and as a mother plant does not hybridise at all freely with other species.



FIG. 6. (a).

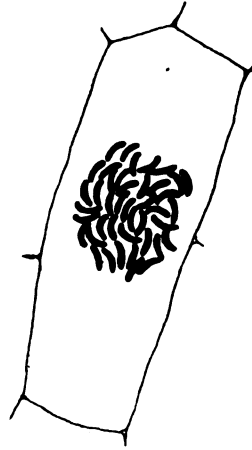


FIG. 6 (b).

Hexaploid Roses with 42 chromosomes in body-cells.

- (a) The regular hexaploid Rose *R. Moyesii* (AABBE) with 42 chromosomes in body-cell (21 in male and female germ-cells).
- (b) The irregular natural hybrid hexaploid Rose \times *R. alba* (AACDE) with 42 chromosomes in body-cell (28 in female germ-cells and 14 in male germ-cells).

(See also pages 61 and 62.)

Rosa nutkana (Pl. X, a & b, Fig. 8d), with a pair of A, D and E septets.

The AADDE species is a native of Western North America. It is chiefly distinguished by its hard crimson fruits, which persist long after the leaves fall and are at their best in this country about Christmas time. As a mother parent, this species hybridises with other species such as *R. Moyesii* (AABBE) *R. Davidii* (AAEE) and its sub-species *setipoda* (AAEE) with extraordinary freedom.

Large numbers of these hybrids have been raised at Burbage and grown on at Cambridge; they seem to be very fertile, and the F_2 generation is awaited with much interest, since so many Rose hybrids are sterile.

Rosa Bourgeauiana, with a pair of B, C and D septets.

Rosa Engelmannii, with a pair of B, D and E septets.

Rosa Sayi, with a pair of C, D and E septets.

The three hexaploid species above *R. Bourgeauiana* (BBCCDD), *R. Engelmannii* (BBDDEE) and *R. Sayi* (CCDDEE) have by most authors been included in the octoploid species *R. acicularis* (BBCCDDEE). In view of the presence of similar septets of chromosomes and characters in these species it is easy to see how the confusion has arisen. From the material sent to me by Professor Cockerell and Dr. Eileen Erlanson it is evident that these hexaploid species grow round Lake Baikal in Siberia as well as in Canada and Michigan.

OCTOPLD SPECIES.

Regular octoploid species with eight septets are even more rare, only eight being found out of 1,006 Roses examined.

Rosa Tackholmii, a new species with a pair of A, B, C and D septets, apparently from Iceland (*cf. R. hibernica* Hooker).

Rosa acicularis, with a pair of B, C, D and E septets. This is a circumpolar species, the precise distribution of which has not yet been critically worked out owing to its confusion with the three hexaploid species above.

IRREGULAR POLYPLOID SPECIES.

The irregular polyploid species with both paired and single septets of chromosomes are of peculiar interest and present some remarkable features. They are confined in their distribution to the Old World in

temperate Europe and Western Asia, covering an area more or less conterminous with that of the Pleistocene Ice sheet at its maximum southern and eastern limits of influence.

These species differ from one another by one or more septets of chromosomes. Out of 180 different combinations of the five septets possible only 25 have so far been identified, and six of these are evidently natural hybrids growing near their putative parents. Three of the septet combinations have been made genetically, thus demonstrating experimentally the possible hybrid origin of these irregular polyploid species.

So far as these species have been tested genetically (12 in my experiments), all appear to be facultatively apomictical. That is to say as a rule they produce, from apparently normal seeds, plants which strictly resemble in all their characters the mother parent, just as if they had been grown from cuttings. These seedlings also have the same number and distribution of chromosomes as the mother parent. My researches into the nature of this phenomenon are not yet completed, but so far the evidence suggests that it is due either to the non-reduction of the chromosomes in the egg-cell and embryo-sacs are formed with the same number of chromosomes as are present in the body-cells without fertilisation or it may be due to homozygous self-fertilisation, the paired A septet, which alone is functional in the male germ-cells of *R. canina* (AABDE), being homozygous or pure-breeding in its genes through a previous duplication of the A septet of chromosomes. The single septets B, D and E functional in the female germ-cells are of necessity homozygous or pure breeding being composed of single chromosomes. Whatever may be the explanation of this curious phenomenon of apomixis, the fact itself is of considerable practical importance to the Rose grower. Armed with this knowledge the grower can now with sufficient certainty for practical purposes proceed to select any type of Briar Stock that he may consider suitable for budding his Roses, save the seeds produced thereon, all of which will produce seedlings identical with the mother plant. That this important fact has previously escaped observation is due to the random collection of Briar Seeds from a crowd of variable individuals giving a corresponding variable result, whereas a selection of seeds from individual

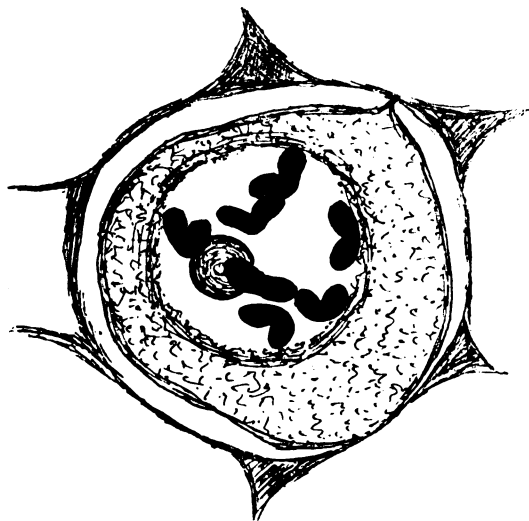


FIG. 7 (a).

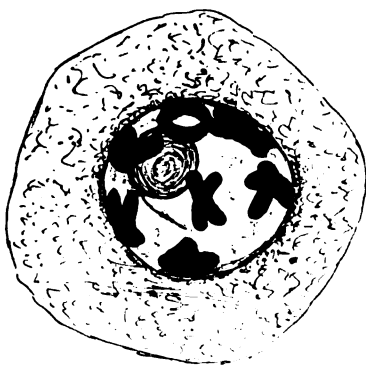


FIG. 7 (b).

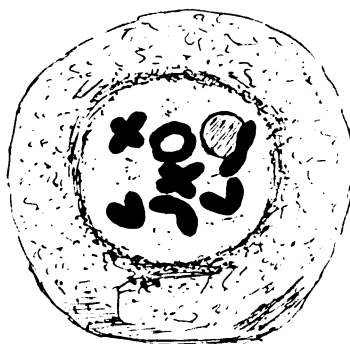


FIG. 7 (c).

Early germ-cells of diploid Roses with seven pairs of chromosomes preparing to reduce in order to form pollen-grains each with seven single chromosomes.

- (a) *R. sempervirens*, sub-sp. *Wichuraiana* (AA), from Japan. (See page 41.)
- (b) The Green China Rose (AA) (in this case the pollen aborts although the first stages of formation are carried through). (See page 47.)
- (c) *R. sericea*, sub-sp. *sertata* (BB), from China. (See page 43.)

plants will, as a rule, give a pure line of true breeders. Thus seedling Briars will be as true to type as Cutting Briars. The fact that this apomixis in Roses is facultative means that occasionally foreign pollen is introduced and variable crosses arise. Our genetic experiments show that in the *Caninae* almost any crosses can be obtained, and we know that the female germ-cells partially reduce and prepare themselves for fertilisation, though in an unique way.

These occasional crosses will, however, be of little moment to the practical grower, as in most cases the incidence of outcrossing is slight. For instance, in my experiments with *R. Froebelii* (Fig. 5) = (*laxa* hort.) out of more than 100,000 seedlings raised from open flowers in an acre of mixed Briars only three seedlings were crosses; all the rest were pure *Froebelii*, identical with the mother plant.

Another peculiarity presented by the irregular polyploid species which at present is unique in plants and animals is the phenomenon of a *regular but unequal* reduction division in the female germ-cells, which causes them to produce final female germ-cells (gametes) carrying from two to five times as many septets of chromosomes as their male germ-cells.

For example the ordinary Briar *R. canina* (AABDE) has four septets of chromosomes (ABDE) in the female germ-cells and only one septet (A) in the male germ-cells. Consequently reciprocal crosses with *R. canina* are entirely different in their chromosome content and, therefore, in their characters.

Thus *R. rugosa* (CC) ♀ crossed with *R. canina* (AABDE) ♂ gives the diploid cross AC with no trace of the B, D and E septet characters, while the reverse cross *canina* ♀ × *rugosa* ♂ gives quite a different cross ABCDE, which bears all the five septet chromosomes and characters. All the irregular polyploid species are fully fertile in spite of their pollen being irregular and only partly fertile. They produce apomictical or sexual seeds in abundance, and maintain themselves so well in ordinary and even unfavourable conditions that they largely dominate the Rose population in Europe. For instance, all the species

of the Section *Caninae* (in a broad sense), commonly known as Briars, belong to the irregular polyploid species, and are either tetraploid, pentaploid or hexaploid.

IRREGULAR TETRAPLOID SPECIES.

Irregular Tetraploid species with paired and single septets are :—

Rosa omissa, with a paired A and single C and D septets.

Rosa recondita, with a paired C and single D and E septets.

Rosa mollis, with a paired D and single C and E septets.

Rosa pomifera, with a paired E and single C and D septets (Fig. 4a).

Rosa rubrifolia, with a paired D and single A and E septets (Fig. 4b).

The three species with C, D and E septets are all true *Villosae*.

PENTAPLOID SPECIES.

Pentaploid species with paired and single septets are :—

Rosa agrestis, with a paired A and single B, C and D septets.

Rosa canina, with a paired A and single B, D and E septets.

Rosa micrantha, with a paired A and single B, C and E septets.

Rosa tomentosa, with a paired A and single C, D and E septets.

Rosa rubiginosa, with a paired B and single A, C and D septets.

Rosa elliptica, with a paired B and single A, C and E septets.

Rosa glutinosa, with a paired C and single B, D and E septets.

Rosa pseudo-mollis, with a paired D and single A, B and C septets. (Found on Limepit Hill, near Cambridge, and is probably a natural hybrid from *rubiginosa* ♀ and *mollis* ♂, which grow with it.)

Rosa coriifolia, with a paired D and single A, C and E septets.

Rosa glauca, with a paired D and single A, B and E septets.

Rosa Froebelii, with a paired E and single A, C and D septets (= *laxa* hort.) (Fig. 5).

IRREGULAR HEXAPLOID SPECIES.

Irregular hexaploid species with paired and single septets are :—

Rosa Pouzinii, with a paired A and single B, C, D and E septets.

Rosa inodora, with a paired B and single A, C, D and E septets.

Rosa Jundzillii, with a paired C and single A, B, D and E septets.

EXPERIMENTAL DETERMINATION OF SPECIES.

The *experimental proof* of these analyses rests entirely on genetical experiments, many of which have been already carried out. Space will not allow these to be presented here, but in the Summer of 1927 I was able to demonstrate these experiments to the Genetical Society when they met at Cambridge.

From the scientific point of view these experiments with Roses have thrown a good deal of light on the problem of species. The old and much vexed question—what is a species?—is now, so far as the Rose is concerned, no longer a question of the personal opinion of doctors who differ; it is simply a matter of genetical experiments combined with the counting of the chromosomes in critical cases, while in ordinary cases the species can be determined by the use of a taxonomic table of the septet characters of the five fundamental species.

The point of real importance is that with modern methods of analysis we now have experimental proof that *a species is a real entity* made up of certain chromosome sets with their complexes of associated genes. The old systematists instinctively recognised this, though in their day they were unable to demonstrate it experimentally.

By the same methods we are also able to determine definitely the sub-species within the species, and the varieties within the sub-species. This clears the way for a better understanding of the distribution of Roses in space and time, and in the end will no doubt help to solve the problems of the evolution and the origin of the species.

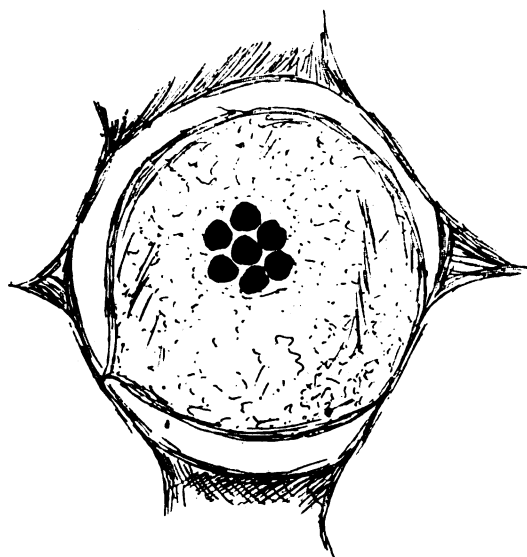


FIG. 8 (a).

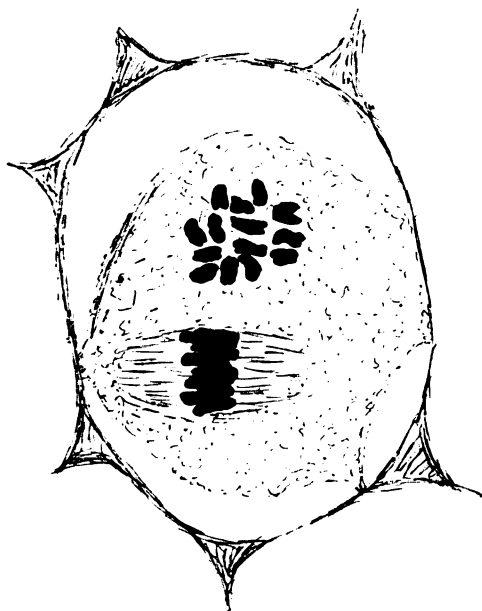


FIG. 8 (c).

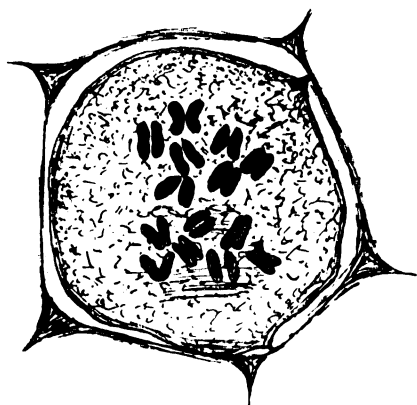


FIG. 8 (b).

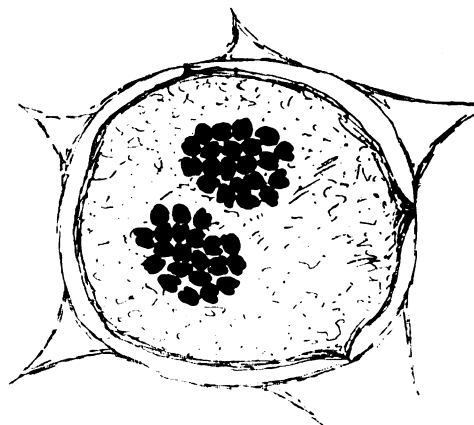


FIG. 8 (d).

Later stages of pollen formation. The formation of four pollen grains from a germ-cell, each of which will contain one-half of the number of chromosomes present in the body-cells.

- (a) *R. macrophylla* (EE diploid) with seven pairs of chromosomes about to reduce. (See page 44.)
- (b) *R. sempervirens*, sub-sp. *Brunonii* (AA diploid) final division of the chromosomes in the cell to form four pollen grains each with seven chromosomes. (See page 41.)
- (c) *R. virginiana*, sub-sp. *lucida* (CCDD tetraploid), the 14 pairs of chromosomes reduced and now preparing to divide to form four pollen grains each with 14 chromosomes. (See page 51.)
- (d) *R. nutkana*, sub-sp. *Nuttalliana* (AADDEE hexaploid), the 21 pairs of chromosomes reduced and dividing to form four pollen-grains each with 21 chromosomes. (See page 53.)

IMPROVEMENT OF GARDEN ROSES.

We now come to consider how we can apply these new scientific facts to the improvement of our garden Roses. Perhaps the best way to do this will be to go through our garden Roses and see what they really are in their septet characters. The oldest cultivated Roses, *centifolia*, *gallica* and *damascena*, cultivated by the Greeks, Romans and Egyptians are tetraploids with paired A and C septets. The old Chinas and Tea Roses cultivated in China for centuries are diploids with paired A septets, or triploid and tetraploid varieties with three or four A septets. The old Noisettes and the new Polyantha Pompon Roses are diploid with a pair of A septets. The Boursault Rose is a diploid hybrid with single A and D septets. The old Bourbon is a triploid hybrid with a paired A septet and a single C septet. The old Hybrid Perpetuals are, for the most part, tetraploids with paired A and C septets. The old Hybrid Teas are tetraploids with three A septets and one C septet, while some of the modern H.T.'s are tetraploids with four A septets. The original *Pernetiana* seedling was a tetraploid with single septets of A, B, C and D, while some later varieties have three septets of A and one B septet. The old natural hybrid \times *Rosa alba* (Fig. 6b) and its offspring, Maiden's Blush, is a hexaploid with paired A and C septets and single D and E septets. Most of the Penzance Hybrid Sweet Briars are hexaploids with paired A and C septets and single B and D septets, though Lady Penzance has paired B and D septets and single A and C septets, while Catherine Seyton is a pentaploid with a paired B septet and three single A, C and D septets. From these analyses it is evident that in order to break new ground in Roses it is necessary to introduce the chromosomes and characters of the E septet into our present A, B, C and D Roses. This can be done by crossing with such species as *Rosa Moyesii* (σ) (Fig. 6a, 9c, Pl. XI, a & b), a hexaploid from China with paired A, B and E septets, or *Rosa nutkana* (φ) (Pl. X, a & b, Fig. 8d), a hexaploid from North America with paired A, D and E septets. A similar result can be obtained by crossing with *Rosa rubrifolia* (φ) (Fig. 4b), a tetraploid from the Alps, with a paired D septet and single septets of A and E. To get the desired result, however, care must be taken to use this species as the female parent since the pollen cells only carry the single D septet, which gives the characters of *cinnamomea* only, while the egg-cells carry the three

septets A, D and E, which give the characters of *rubrifolia*. In the same way the hexaploid natural hybrid \times *Rosa alba* (Fig. 6b) carries in its egg-cells the four septets A, C, D and E, while the pollen-cells carry only two septets, A and C. It is only by using *alba* as the female parent that one can get the *alba* characters; in using *alba* as the male parent one only gets the characters of *centifolia*. *R. Davidii* (Pl. VII, a, b & c) from China, a tetraploid with paired A and E septets, would provide an excellent parent for this purpose, as well as its sub-species *Fargesii* with large flowers and fruits, another sub-species *setipoda* with its graceful habit, leaves and bunches of flowers followed by drooping fruits. One drawback to the use of the last species is that while the flowers appear in large clusters, yet for the most part the fruits set singly.

Hybrids between garden Roses and the above species are more likely to be fertile than direct hybrids with the pure EE species, *Rosa macrophylla*, which would give, for the most part, sterile triploids. Fertility in the second generation is necessary in the formation of a new race of Roses, since it is only in the second generation that we can get the recombinations of characters that we require, and many of the desirable qualities in garden Roses are recessive in the first generation. We now know definitely that sexual fertility is largely bound up with the pairing of the chromosomes present in complete septets. The chief desirable characters carried by the E septet are smooth, erect, cany stems, graceful foliage, large brilliant flowers and long-necked, pendulous fruits of various colours. These characters would be a welcome addition to our garden Roses, and may be secured in the *second* generation of breeding, if the breeder has a bit of luck and follows it up. In attempting to add these new characters, however, great care must be taken not to lose the desirable characters of form, colour, fragrance and perpetual flowering that we already have, and here arises a real difficulty, which a knowledge of the septet characters will help us to surmount. For instance, the A septet provides us with the delicate translucent colours of the China and Tea Roses, while the combination of the A and C septets gives us the deep velvety crimson of the Hybrid Perpetual, as well as the brilliant scarlets. The B septet gives us the rich yellow of *lutea* which comes out in some of the *Pernectianae*. The C septet provides us with the delicate and refined Old Rose fragrance of the Cabbage Rose, the A septet gives us the

odour of the Musk and Tea Rose, while the combination of both A and C septets produces the rich damask perfume of some of the old Hybrid Perpetuals. The B septet gives us some disagreeable odours, the D septet provides some spicy scents, while the E septet gives little fragrance. *True* perpetual-flowering is peculiar to the A septet. It is unknown in a wild state, though I have observed two definite cases in wild seedlings from China raised at Cambridge. It first appeared as a recessive mutation in Chinese gardens in the sub-species *chinensis*. The gene for perpetual flowering is either identical or very closely linked in the same chromosome with the gene for dwarf habit of growth. This should assist the breeder materially in creating a dwarf perpetual *Moyesii*.

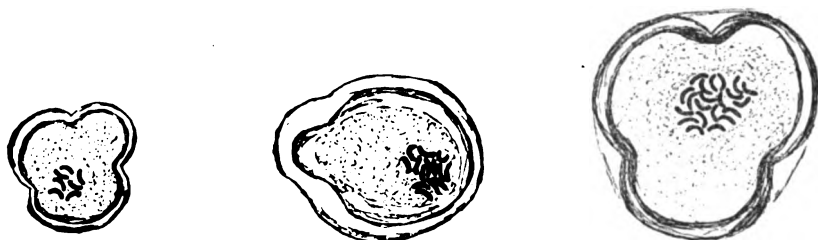


FIG. 9 (a).

FIG. 9 (b).

FIG. 9 (c).

Young pollen grains showing the reduced number of chromosomes.

- (a) The diploid *R. carolina*, sub-sp. *cinnamomea* (DD), with seven chromosomes in germ-cell (14 in body cells).
- (b) The tetraploid *R. pimpinellifolia*, sub-sp. *Verborget* (BBDD), with 14 chromosomes in germ-cell (28 in body-cells).
- (c) The hexaploid *R. Moyesii* (AABBEE) with 21 chromosomes in germ-cell (42 in body-cells).

There are also further but much more remote possibilities of raising entirely new races of garden Roses by the use of four other distinct diploid species usually classed as *Rosa*, but which our septet analyses prove to be four distinct though related genera of the Rose tribe. One of these, *Hesperhodos minutifolia*, with its sub-species *stellata* and *mirifica*, so far refuses to cross with *Rosa*. This primitive genus from the Western United States is a desert plant with small leaflets resembling some of the fossil Roses found in the Miocene beds of Colorado, which are the oldest Roses known. It has large, striking

flowers and prickly fruits; in the distance the plant is not unlike a gooseberry bush. Two of the other genera have produced hybrids with *Rosa*, namely *Ernestella bracteata* from China and India, which, though rather tender, has large white woolly late autumnal flowers with bunched bracts; it has been crossed with a yellow Tea Rose, giving the lovely Mermaid which, though bearing single flowers, is quite sterile at Burbage and Cambridge.

Platyrhodon macrophylla, from China and Japan, the so-called Chestnut Rose with cup-shaped fruits covered with fleshy spines seems more promising in its fertility since I have succeeded in raising the second generation of a hybrid with *Rosa rugosa*. The results, however, though extremely interesting from the scientific point of view, are not very promising horticulturally, since the grandparent *rugosa* has been reproduced in facsimile several times, while the others resemble the parent hybrid with strange mutational variations.

The remaining genus, *Hulthemia persica*, from the salty deserts of Central Asia, is the Rose with simple leaves and no stipules, with Cistus-like flowers, yellow blotched with red; it has been crossed with *Ernestella*, with which it gave the beautiful hybrid known as *R. Hardii*, which, however, is quite sterile at Burbage and Cambridge, and is difficult to keep alive out-of-doors, though it luxuriates in a greenhouse. Since one of the parents comes from the hot plains of Bengal this is not altogether surprising. The other parent, *Hulthemia*, is equally difficult to cultivate in our wet climate, though it survives in Paris and the South of France.

In view of these facts there does not seem to be much hope of raising new races of garden Roses outside the genus *Rosa*, of Linnaeus. In that genus, however, there is plenty of scope by introducing, as suggested, the chromosomes and characters of the F septet, which are entirely lacking in our present garden races.



PLATE I (a).

Diploid AA species with 14 chromosomes in body-cells and seven in male and female germ-cells.

Rosa sempervirens, sub-sp. *longicauspis*, var. *lucens*, from China.

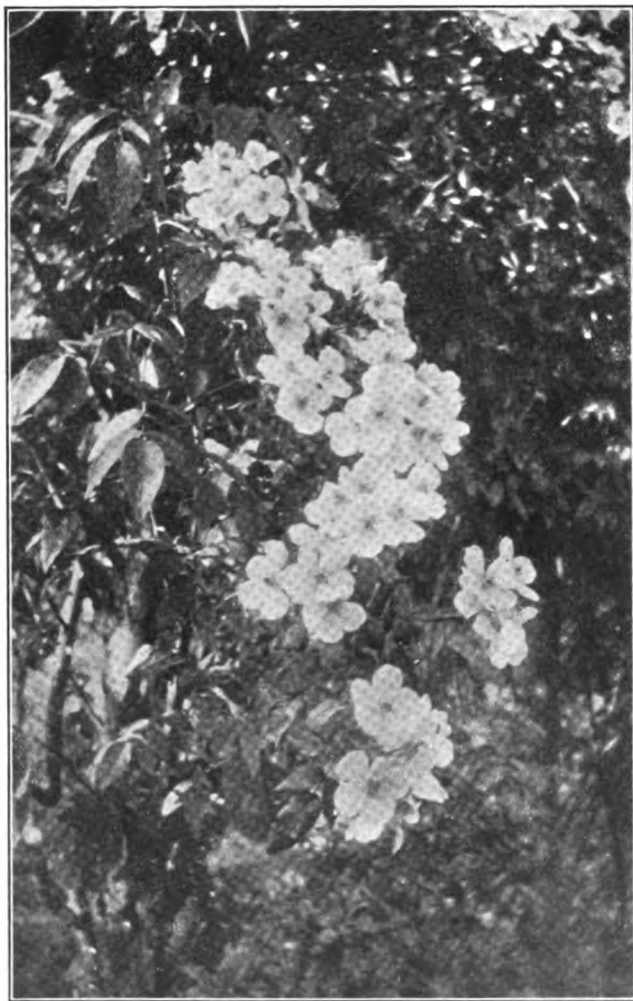


PLATE I (b),

Diploid AA species with 14 chromosomes in body-cells and
seven in male and female germ-cells.

Rosa sempervirens, sub-sp. *Brunonii*, from the Himalaya.

PLATE II.

Diploid BB and CC species with 14 chromosomes in body-cells and seven in male and female germ-cells.



(a) *Rosa sericea*, sub-sp. *Hugonis* (BB), from China.



(b) *Rosa rugosa* sub-sp. *nipponensis* (CC), from Japan.



PLATE III (a),

Diploid BB fertile cross with 14 chromosomes in body-cells and seven in male and female germ-cells.

Sub-sp. *Hugonis* ♂ × *sericea* ♀.

Raised in the Botanic Garden at Cambridge.



PLATE III (b),

Diploid BB fertile cross with 14 chromosomes in body-cells and seven in male and female germ-cells.

Sub-sp. *omeiensis* ♂ × *sericea* ♀.

Raised in the Botanic Garden at Cambridge.

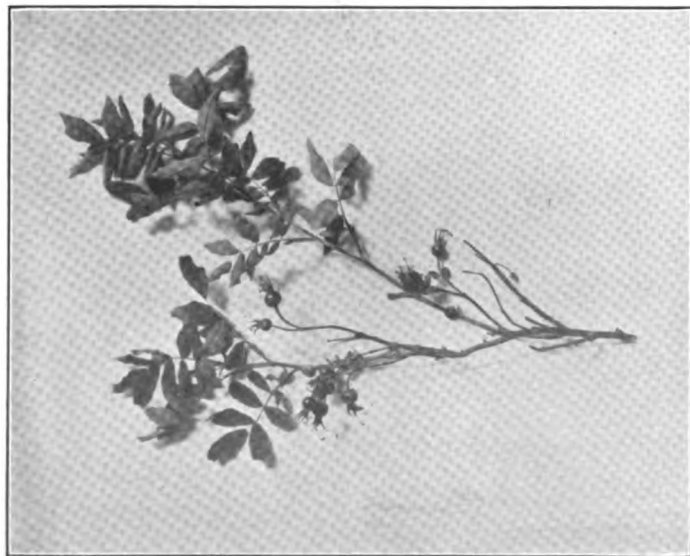


PLATE IV (a).

Diploid DD and EE species with 14 chromosomes in body-cells and seven in male and female germ-cells.

Rosa carolina, sub-sp. *blanda* (DD), from North America.



PLATE IV (b).

R. macrophylla (EE) from the Himalaya.

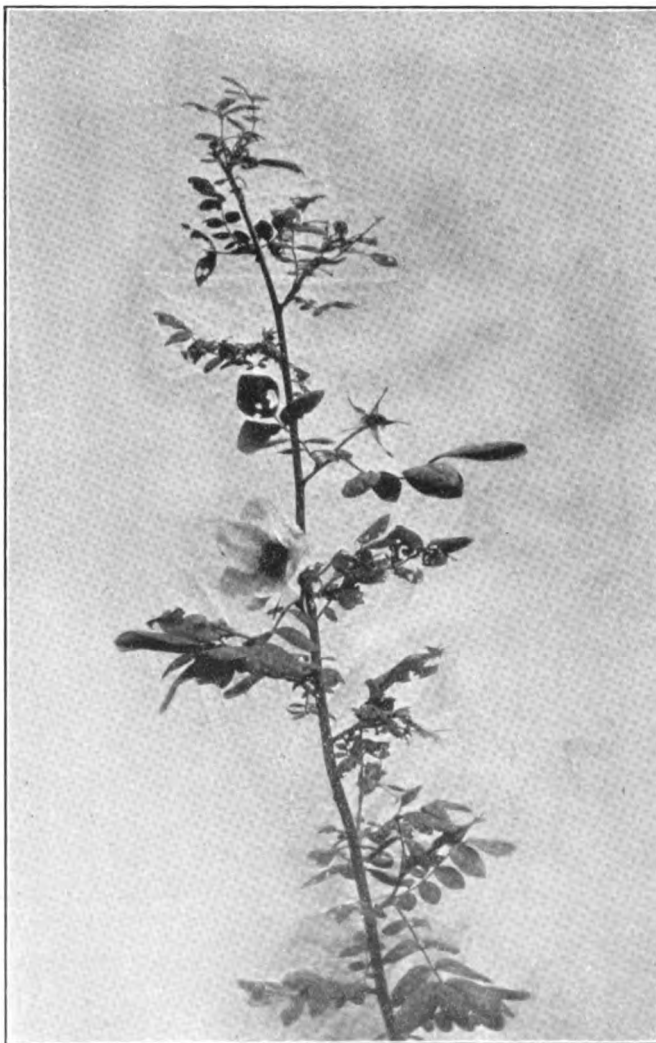


PLATE V (a).

R. macrophylla, var. *Korolkowii* (EEEE), a giant tetraploid variety of the diploid species *R. macrophylla* (EE), found in a garden at Khiva. This tetraploid variety has 28 chromosomes in body-cells instead of the normal 14, and 14 chromosomes in the male and female germ-cells instead of the normal seven.

The specific characters of this tetraploid are the same as those of the diploid but are much enlarged.

(a) Flowering stem.

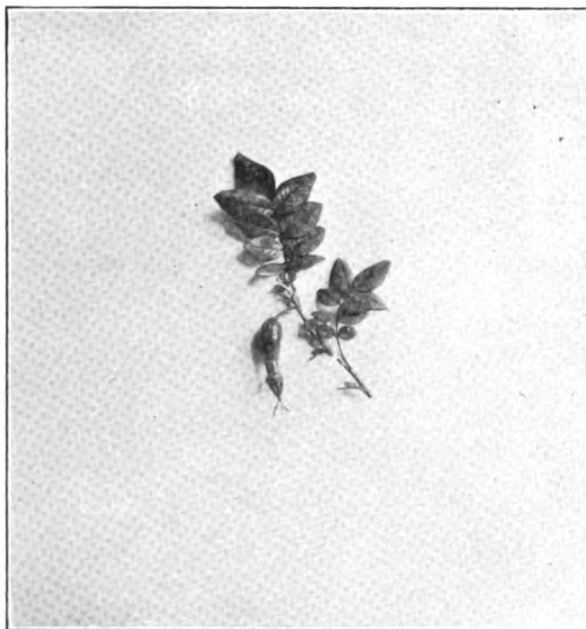


PLATE V (b).

R. macrophylla, var. *Korolkowii* (EEEE), a giant tetraploid variety of the diploid species *R. macrophylla* (EE), found in a garden at Khiva. This tetraploid variety has 28 chromosomes in body-cells instead of the normal 14, and 14 chromosomes in the male and female germ-cells instead of the normal seven.

The specific characters of this tetraploid are the same as those of the diploid but are much enlarged.

(b) Fruiting branchlet.



PLATE VI (a).

The tetraploid species DDEE with 28 chromosomes in body-cells and 14 chromosomes in germ-cells.

R. pendulina (= *alpina*) from the Swiss Alps.

(a) Flowers and habit of growth.

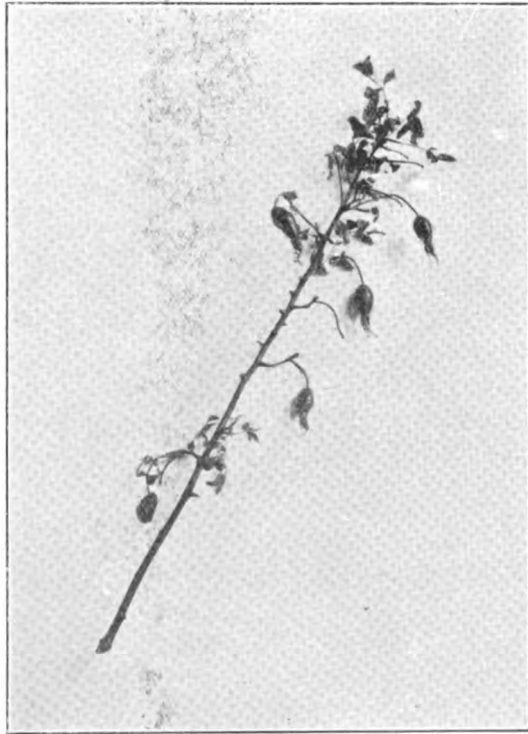


PLATE VI (b),

The tetraploid species DDEF with 28 chromosomes in body-cells and 14 chromosomes in germ-cells.

R. pendulina (= *alpina*) from the Swiss Alps.

(b) Fruiting branch.

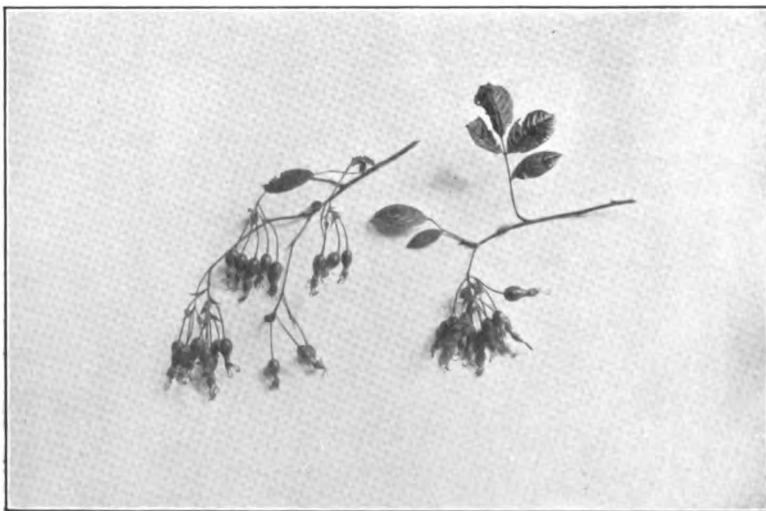
PLATE VII.

The tetraploid species **AAEE** with 28 chromosomes in body-cells and 14 chromosomes in germ-cells.

R. Davidii from China.



(a) Flowering branch.



(b) Fruiting branch.

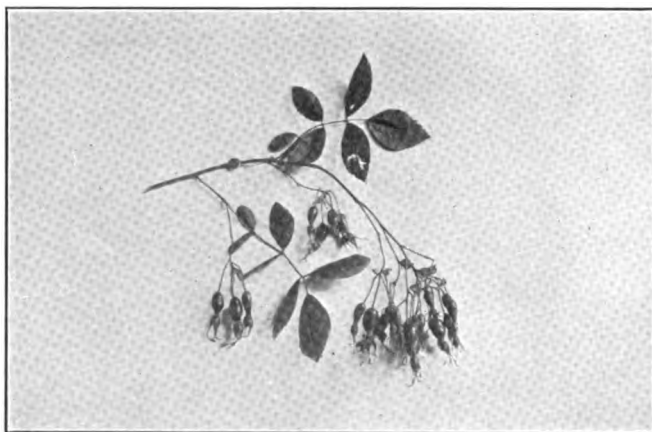


PLATE VII (c).

The tetraploid species *AAEE* with 28 chromosomes in body-cells and 14 chromosomes in germ-cells.

R. Davidii from China.

(c) Fruiting branch.

PLATE VIII.

Tetraploid species with 28 chromosomes in body-cells and 14 in male and female germ-cells.



(a) *R. spinosissima* (BBCC) from Western Europe (fruiting branch).



(b) *R. pimpinellifolia*, sub-sp. *altaica*, var. *grandiflora* (BBDD), from Central Asia (fruiting branch).

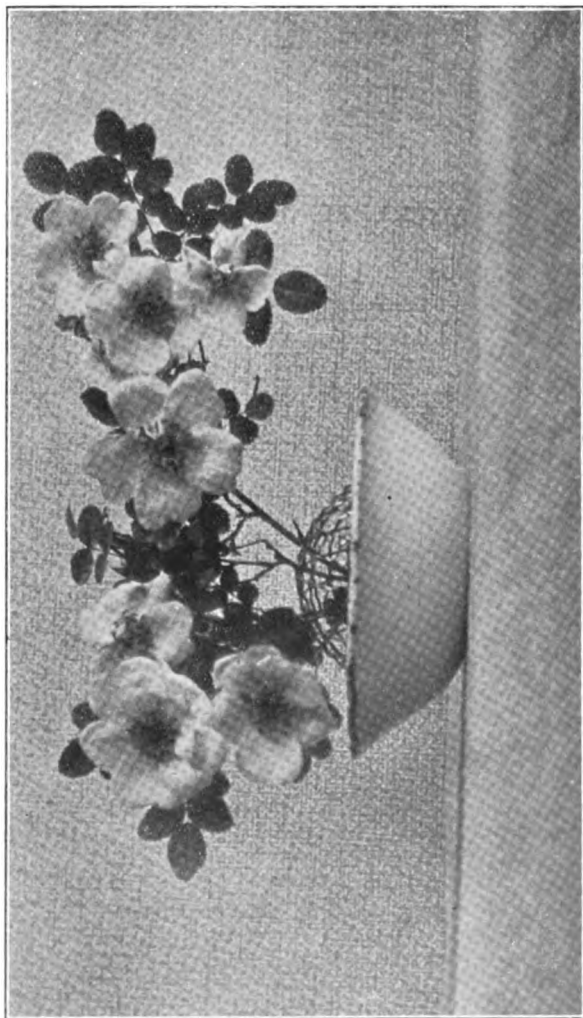


PLATE VIII (c).

Tetraploid species with 28 chromosomes in body-cells and 14 in male and female germ-cells.

(c) *R. pinnatifida*, sub-sp. *altaica*, var. *grandiflora* (BBDD), from Central Asia (flowering branch).



PLATE IX (a).

Tetraploid species (BBDD) with 28 chromosomes in body-cells and 14 in male and female germ-cells. *Rosa pimpinellifolia*, sub-sp. *ochroleuca*.

Flowers and habit of growth.

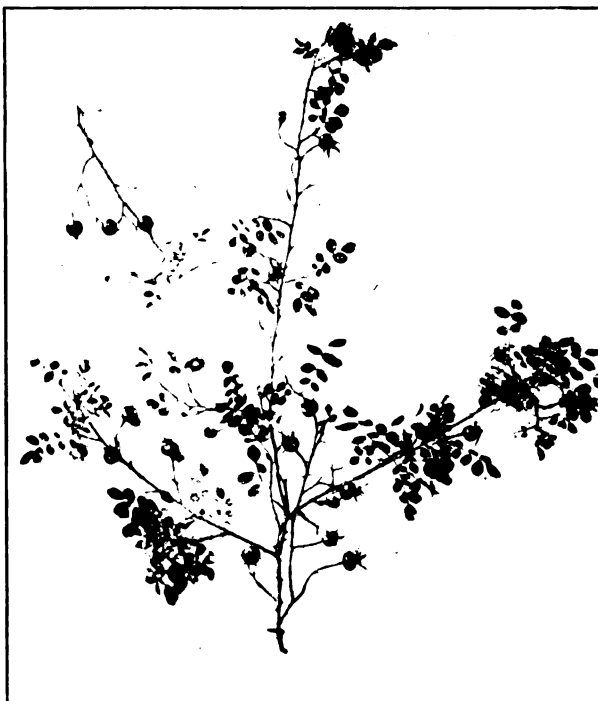


PLATE IX (b),

Tetraploid species (BBDD) with 28 chromosomes in body-cells and 14 in male and female germ-cells. *Rosa pimpinellifolia*, sub-sp. *ochroleuca*.

Fruiting branch.

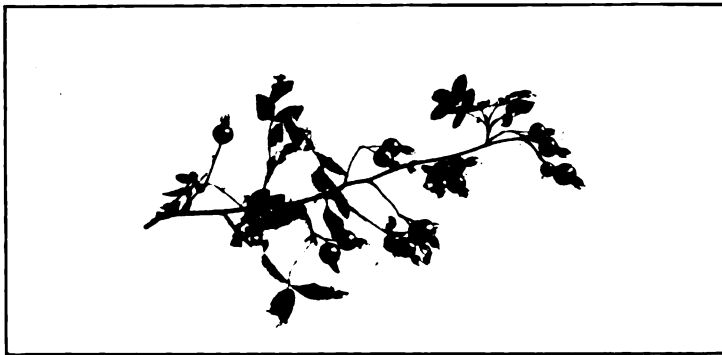


PLATE X (a).

Hexaploid species from Western North America with 42 chromosomes in body-cells and 21 in male and female germ-cells.

R. nutkana (AADDEE).

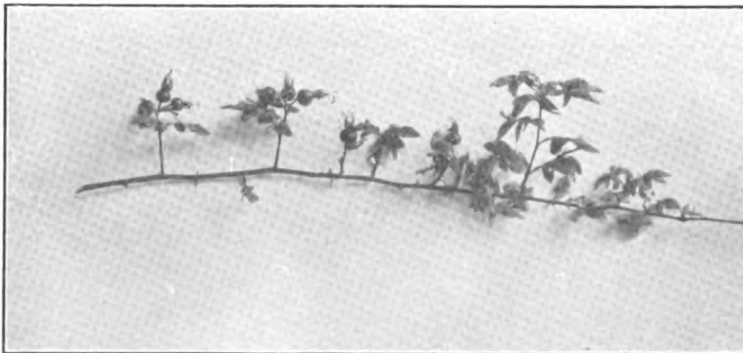


PLATE X (b).

Its sub-species *Nuttalliana* (AADDEE). Both are strong growing, free flowering and fragrant, the hard crimson fruits persist long after the leaves fall and are best at Christmas time. This American species hybridises freely, as the mother parent, with the Chinese species *R. Moyesii* (AABBER) and *R. Davidii* (AAEE).

PLATE XI.

The hexaploid species *R. Moyesii* (AABBEE) with 42 chromosomes in body-cells and 21 chromosomes in male and female germ-cells.



(a) A seedling form with typical small leaves and elongated fruits.



(b) A seedling form with larger leaves and shorter fruits.



THE FUTURE OF THE ROSE.

MR. H. R. DARLINGTON : The title of this paper is not of my own choosing. Left to myself I should have sought a humbler field, but I have to adapt myself to my environment, and to endeavour in some measure to assist in carrying out the scheme designed by those responsible for the arrangements of this Conference.

The future of the Rose lies in the lap of the gods, powerfully affected, it may be, by the efforts of the raisers and growers of Roses and by the weapons which science, with ever-increasing insight and precision, is gradually placing in their hands. But the results of these efforts are difficult to foresee, and can only be estimated by a review of our present field of flowers, aided by a knowledge, however inadequate, of the processes by which the position of that field has developed.

The history of the Rose shows that its development has been effected by two distinct processes : the first occurs by something of the nature of a jump, often caused by the introduction into our garden Roses of the influence of some distinct species, *e.g.*, *R. multiflora* or Persian yellow, resulting in the production of some new and distinct type of flower or plant; and the second process consists of the gradual development and improvement of the new type into the varied forms of this new type which, for a period, take possession of our gardens.

The instances of this double process are extremely numerous in the Rose. Illustrations of the first method may be found in the introduction of the Hybrid Perpetual in 1842, the Hybrid Tea in 1877, the multiflora and wichuraiana ramblers in 1893 and 1900, and the group called after M. Pernet Ducher, of which Rayon d'Or appeared in 1910, and Mme. E. Herriot and Willowmere at the International Exhibition of 1912.

Many others might be cited, but in each case the introduction of the new break, if it is found to be successful, is followed sooner or later

by a development within the new type, by a gradual process, into a new group of numerous forms and varieties which may, in some cases, completely supersede and replace the older type, which then ceases to be further developed.

Thus the introduction of new Hybrid Perpetuals has practically ceased, and the place of this type in our gardens has been assumed first by the Hybrid Tea group, and secondly the Pernet Roses, and these two later groups are still being propagated and improved, they are, in fact, showing a tendency to colaesce, so that in a plant like Mrs. Henry Bowles we find the large thorns and small prickles characteristic of the Pernet group associated with a flower bearing resemblance to the Hybrid Tea; Shot Silk may be cited as an example of the converse of this.

The normal course, however, is that when the new break has established its group and become popular, a continuous development confined to the new group proceeds and becomes extended with gradual and persistent improvement, until in its turn it is again swept away by the inroad of some new and still better type. Moreover, the new break may often produce a definite influence on the character of our garden Roses which will persist after the group which gave rise to it has come to an end.

We may see this, I think, in the Hybrid Perpetual which, as compared with the Roses which preceded it, marked a great advance in the size and dignity of the Rose, in addition to its promise of a longer flowering period, and if again we compare some late member of the group such as Hugh Dickson with the earlier members of which Dean Hole wrote with so much enthusiasm, we find the addition of other desirable qualities (*e.g.*, improvement in form) which have been secured by development within the group.

The main characteristics of the Hybrid Teas, as compared with the Hybrid Perpetual group, showed a great advance in the form of the flower, coupled with the attainment of the perpetual flowering character which had been heralded by the former groups; but when

the Hybrid Perpetual was swept away by its successor the qualities of size and dignity of the flower to a large extent remained in the new group.

The characteristic of the Pernet group has been the great improvement and variety of colouring in the flower; but this was accompanied by a loss as compared with the Hybrid Tea of the quality of form, at least in the earlier members of the group, and the absence of the pronounced fragrance so much valued in the Rose.

It may possibly be that the coalescence of the two groups, the Pernet group and the Hybrid Tea, is resulting from an attempt to get into the Pernet group with its magnificence of colour, the beauty of form, which many of the Hybrid Teas have already achieved, and the fragrance which is so much desired.

If, therefore, we do not look outside our existing Roses for some new and distinct break it may well be that it is here, in the marriage of the Pernet colouring with the form of the Hybrid Tea that we may find our immediate chance of development.

Possibly also we may look for some improvement among certain types of Roses in the carriage of the flower. In such a Rose as *Ophelia* and its sports we can, perhaps, expect nothing further in this direction; but there are beautiful flowers, of which Mrs. Foley Hobbs is an example, which are quite impossible as garden Roses because the flower stalk is not strong enough to carry the weight of the flower. It might do something to promote improvement in this respect if, in the decorative classes at least, the use of wires to support the blooms were strictly prohibited.

If we look outside the popular Roses of our gardens we find that a large number of new species have been brought into cultivation in recent years, *e.g.*, *R. Moyesii*, *R. Helenæ*, *R. Multibracteata* and various forms of *R. Souliana*. All these have very distinct qualities which confer on them considerable value as flowering shrubs. The unexpected may always happen, and it is within the bounds of possibility that an enterprising hybridist may, after years spent in working on these forms

and their offspring, produce a new type of exceptional merit that will supersede our existing groups. It is possible but at present seems improbable.

The Australian raisers have been experimenting with hybrids of *R. gigantea* and Mr. Alister Clark and others have already obtained a small group which attracts considerable interest, but it is clear that they have yet some way to go before they can expect to give us a race of such outstanding merit as to challenge the position of our Roses now cultivated.

An interesting feature in the history of the Rose has been the way in which some new break has been achieved, and a measure of success obtained, and yet development has been suddenly arrested, just as the raisers appeared to be on the threshold of success. Instances of this are to be found in the Moss Rose, in Lord Penzance's Sweetbriars, in the rugosa group, and in the group of *R. semperflorens*.

The great hardiness of the rugosa family, its freedom from most diseases, and the fragrance of many of its hybrids seemed at one time to hold out much promise, and at the end of last century several raisers were at work on this group. In 1900 Frœbel introduced Conrad F. Meyer, a most satisfactory Rose, so far as it goes, and in 1901 Mr. Jules Graveraux gave us *Rose à parfum de l'Hay* of delicious fragrance, and even as late as 1914 Mr. George Paul brought out a rugosa hybrid of much grace in *Dolly Vardon*.

There, it seems, development was arrested, and these three Roses remain the heads of their type. Quite recently, however, Miss Preston of the Ottawa Experimental Farm and some others have turned their attention to the rugosa family with a view to obtain Roses calculated to withstand the Canadian winters.

The Penzance Sweetbriars practically remain as Lord Penzance left them, for, though Messrs. William Paul & Co. brought out *Refulgence* in 1908, with that exception little has been done to improve the Sweetbriar since Lord Penzance's death. They are, however, such strong and vigorous growers that scope for improvement in the production of a perpetual flowering sweetbriar seems open to an enterprising hybridist.

I propose now to review briefly the Roses introduced since 1912, when the last International Exhibition in this country was held.

In the "Horticultural Record" I traced the development of the Rose down to that date, and I need not repeat what I then wrote.

In that year Messrs. Wm. Paul & Son introduced Ophelia, one of the most successful instances of development within the group that I can call to mind. The Rose has many excellent qualities, the erect carriage and beauty of the flower, the long stalk on which it is borne, its fragrance and the vigour of the plant, justify us in regarding its introduction as marking a new epoch in decorative Roses. This is accentuated by the deeper colour given in some of its sports, notably by Mme. Butterfly, brought out in 1920.

A feature of this class of Rose, of value to amateurs, is that the flowers are carried upright, but not stiffly, on long stems, the upper part of which does not carry much foliage, so that they can be cut on long stems for decorative purposes without serious injury to the plant through loss of foliage.

Another class of Rose which has worked a revolution in our gardens is the Pernet group. Rayon d'Or had appeared in 1910, and at the International Exhibition of 1912 Mme. Edouard Herriot received the *Daily Mail* Cup and was introduced into this country in the following year. The mixture of pink and yellow or orange in its colouring was very striking. It at once became popular, and perhaps it may be regarded as chiefly responsible for the advance in colour which formed the characteristic of the new Roses of the subsequent decade.

Taking the yellows first we had Mrs. Wemyss Quin, 1915, Golden Emblem in 1916, Emma Wright 1917, Christine and Lamia 1918, Mrs. Redford 1919, Souvenir de Claudius Pernet 1920, Mabel Morse 1922, and Florence Izzard 1923. For a combination of colour and form Mabel Morse is still the best of its group and, but that it is insufficient in vigour, would be widely grown.

Mrs. Wemyss Quin, Golden Emblem, and Florence Izzard have greater vigour of growth, but the first two lack form and the latter substance of flower.

Of the pinker shades we find Gorgeous in 1915, Los Angeles 1916, Henrietta 1917, Padre 1920, Mrs. Henry Bowles, Betty Uprichard, and Lady Inchiquin 1921, and Shot Silk 1924. From its delicious fragrance, wonderful colour and many good qualities Shot Silk may, perhaps, be considered the crown of the group. Its fault being the fleeting character of both colour and the flower itself.

A few of the purer pinks must be mentioned for their delicious fragrance, and for this I would take Mrs. Bryce Allen 1916, Mrs. Henry Morse 1919, Dame Edith Helen 1926, and Flamingo shown last year.

In White Roses I cannot see any great advance. We want a fragrant Frau Karl Druschki, and it is yet to come. We find some white sports of Ophelia, of which Westfield Star appeared in 1920; then Marcia Stanhope, a beautiful and fragrant Rose, was hailed as an acquisition in 1922, but the foliage is too subject to mildew and it does not stand rain so well as Frau Karl Druschki. Possibly Mr. Easlea's Everest may assist us here, but it has still to be tried.

In Red Roses there has been rather more movement. Col. Oswald Fitzgerald and K. of K. appeared in 1917, followed by Lord Charlemont in 1922. These are Roses of most brilliant, almost scarlet colouring, but unfortunately almost devoid of fragrance.

Fragrance, however, is found in some of the deeper crimsons, *e.g.*, Hoosier Beauty 1915, a fine Rose but too straggling for a good garden plant, and Etoile d'Hollande 1919, a rather small Rose of most delicious perfume, and a real advance in our garden Roses. Perhaps Mrs. Winnett 1922, may be added, and certainly G. H. Mackereth 1924, and Lady Helen Maglona 1926. All these appear to be fairly good growers and of quite good perfume. But whether and how far any of these will succeed in ousting our old friends Hugh Dickson and Richmond may be another matter, and only time can show.

In the wichuriaina ramblers the rush of good new varieties has greatly diminished, and the characteristic of the period has been the endeavour to obtain a larger flowered type. Purity, a long way the best white, appeared before our period, but was reintroduced within it

in 1917; Dr. Van Fleet had come in 1910, and Dr. Williams undoubtedly secured a great success with Emily Gray in 1916.

Others of this type are Albertine 1921, Mary Wallace 1923, and Chastity, 1924, all I think worth growing.

A good small flowered white called Sanders White came in 1915, but Dorothy Perkins is still supreme in her season, none of the others which have come into my garden flowering so late in the year. Paul's Scarlet Climber should also be added to my list. It came out in 1916 and, like Purity, may be regarded as partially pereptual, for one can generally gather vases of both these Roses in autumn, though the flowering is not so profuse as in summer.

A useful hybrid noisette, flowering only in summer, is Paul's Lemon Pillar; it is appreciated for its uniformly well-formed flowers.

An entirely new group of Hybrid Musk Roses has been introduced by the late Mr. Pemberton. They form useful flowering shrubs, and should be treated similarly to these. He gave us Danae and Moonlight in 1913, Pax in 1918, and Vanity 1921.

This brief sketch of our recent garden Roses suffices, I think, to explain the common complaint of lack of fragrance in the modern Rose. We find four distinct sets or lines of Roses that have become extremely popular in our gardens, and yet have little or no perfume.

First the yellows from Rayon d'Or to Mabel Morse.

Secondly the orange pinks, Mme. Edouard Herriot to Lady Inchiquin.

Thirdly the whites, Frau Karl Druschki remaining the most popular of that colour and Mrs. Herbert Stevens having only the Tea perfume.

Fourthly the bright reds, K. of K. to Lord Charlemont.

These four groups occupy much space in a modern Rose garden, and enable us to understand the grounds of the complaint; but improvement is coming perhaps slowly, but quite certainly.

In the first group Mabel Morse has a slight perfume, and we may get the fragrant yellow Rose before very long.

In the second Lady Inchiquin is not wholly devoid of scent, and Shot Silk, which I have taken as the latest development of that group, has an altogether delightful odour.

In the third group I have shown that we already have fragrant white Roses, though not such, perhaps, as will produce good blooms with the comparative ill-treatment accepted by Frau Karl Druschki.

In the fourth group Hortulanus Budde, 1919, may perhaps be included, and if so we may find some fragrance there, though it may not be so full as might be wished, while in the deeper crimsons fragrance is fully acquired.

We may, therefore, confidently expect to obtain the wished for perfume in the not distant future, and in the meantime the public have the remedy in their own hands. They have plenty of good fragrant Roses to choose from, and if they will resolutely discard those Roses which, however attractive in other respects, are lacking in the quality of perfume, all the other good qualities will in time be added to it. Moreover, taking our Roses as a whole, so far as I can discover, the fragrance of our Roses to-day is greater and not less than the Roses of our fathers. I think this is certainly true of those called novelties.

THE FUTURE OF THE ROSE AS A DECORATIVE FLOWER.

MR. G. M. TAYLOR: In coming forward in Mr. Monro's and Mr. Shawyer's places I cannot be expected to take the same view of the future of the Rose as a decorative flower that those gentlemen do, because I look at this question from a totally different standpoint. At the same time, in order that you should get some idea of what Mr. Monro was likely to say to you on the subject, I got him to send me a note of the remarkable development of Roses as cut flowers in Covent Garden Market. I think, in the first place I ought to let you have these figures which Mr. Monro has kindly supplied. In dealing with this particular subject you will notice that in the programme of this conference, the title is given as "The Future of the Rose as a Decorative Flower." I thought I was to be a minor prophet this afternoon, our friend, Mr. Darlington, being the major prophet in the morning; but with the wisdom of the Englishman, he kept off prophecy altogether. I will try to give you a little history and at the same time combine a little prophecy with it. In the first place we ought to take Mr. Monro's notes regarding Roses as cut flowers, and the development of them in Covent Garden Market. He says: "The development in the growing of Roses has meant that the supply to Covent Garden has more than doubled in the past nine or ten years." He continues, "We ourselves receive, during the height of the season, up to 12,000 to 14,000 dozen a day; 20 years ago 2,000 dozen was considered a very heavy day. The bulk of the supplies come from the Cheshunt district, which, I should say, is partly due to the soil there being specially suited to Rose cultivation under glass; it has also, undoubtedly, been helped by the fact that it was in that district that the Stevens family started commercial Rose growing some 40 to 45 years ago. The four sons of the original Stevens, together with one of the grandsons, now own somewhere about 40 to 50 acres of glass, devoted solely to the production of Rose blooms. The American types are all very well for winter

production, but do not appear to be suitable for the usual rotation which our growers expect, *i.e.*, four crops a year, and the development, therefore, has followed the lines of the varieties which give us those crops. We do not want an unlimited number of varieties"—and I want you to take particular notice of that point—"and at present the bulk comprises the following." Now I think I might interpolate a remark regarding that. I think many of the salesmen in Covent Garden Market are practically millionaires, and the reason is that they do not list, as some nurserymen do, 300 or 400 varieties of Roses; in fact, you can number all the Roses they will sell in Covent Garden almost on the fingers of one hand, and I think the mistake that has been made in regard to the growing of Roses is that our lists in catalogues are top-heavy. We have far too many of them, and we could cut down these Roses by 50 per cent. without the British public, who grow Roses, being in any sense losers. Mr. Monro's list, which follows, is this: pink, Butterfly, Sylvia; yellow, Golden Ophelia; bronze yellow, Roselandia; red, Richmond; white, Molly Crawford. He says: "Of the minority we get fair supplies of red, Hoosier Beauty and Hadley, and dark pink, Premier. He goes on to say, "When a good, new Rose comes along with a long stem it almost invariably displaces one of the existing varieties. As an example of this Sylvia and Butterfly have displaced Chatenay, at one time the principal pink Rose marketed, and now practically disappearing, while Golden Ophelia and Roselandia have replaced Melody." I do not say that these Roses Mr. Monro mentions are the Roses for the garden, but they appear to be the Roses which make money in Covent Garden Market. He then writes: "It is a pity that the old favourite, Maréchal Niel, is now so rarely seen, as it has points possessed by none of the new Roses; the cause is its weak, short stem, making it unsuitable for vase work, and ladies rarely wear sprays nowadays. In quantity the Roses marketed are quite up to the proportion of the total of flowers handled in the market, even in spite of the great increase in carnations attributable to the raising of the so-called American type of carnation and, therefore, the future development in Roses will probably be gradual. The demand for Roses is still as great as ever, and I have no doubt that it will continue. The public now demand in every flower a good stem, and the present breed of Roses meets this requirement. Practically every flower has shown a steady improvement

in quality and variety over the past 30 years, and none more so than the Rose."

Now, Mr. President, you find that these keen business men who are selling Roses to the British public through Covent Garden Market have their varieties limited to practically one dozen. Why do nursery-men persist in listing such a huge number of Roses? Some nurserymen take the credit for listing 1,000 varieties, and seem to be proud of it. If we can limit Roses to 50 varieties—and I think 50 will cover the number—that is quite ample, and they can be improved upon as time goes on if necessary. Let us have Roses in the garden which approximate to the requirements of the glass growers, and if the Rose Society takes that attitude it will do a great deal more to popularise Roses than it is doing to-day. I have been able to get some figures which are of interest, showing what a huge business the Rose trade is in this country. It has been found that there are, approximately, 1,000 acres under cultivation with Roses in England and Wales. If we say that 30,000 Roses are grown per acre, that gives us a total of 30,000,000 Roses in different stages are grown in England and Wales alone, and if we add, say, a million each for Scotland and Ireland, we have something like 32,000,000 Roses being grown in Great Britain and Ireland. That shows that the Rose is undoubtedly one of the most popular flowers, and I contend that if we drastically cut out many useless varieties we are going to do a great service, not only to ourselves but to the National Rose Society. I find that one-tenth of the business—and I have this on good authority—done last season was done by a certain firm of multiple shopkeepers in Great Britain, who practically sold $3\frac{1}{2}$ million Roses to the British public. These Roses are not British grown Roses, but nevertheless, it shows what a demand there is, and they sell these Roses in larger numbers than any British nurseryman or any firm of dealers. I have spoken about the present, and of the demand for Roses, and we all know, of course, that the enormous popularity of the Rose is growing, owing to its beauty, its hardiness, and its free flowering qualities. We have heard this morning many lamentations about the lack of fragrance in Roses, and I was glad to hear the President say that the Roses we have to-day are quite as fragrant as those of our forefathers. We have Roses to-day in our lists that are quite as fragrant as any of the old Roses. Why all this cry about lack of

fragrance? It is quite an easy matter to pick out one dozen Roses which are as strongly scented as any of the Roses of our forefathers, and if the National Rose Society does start a class for fragrant Roses, they will get these Roses, and can then show in the new trial grounds that they have the necessary qualities. I contend that the day has passed for judging Roses on the bench. I have said that for the last ten years. We want to see Roses growing, and what Mr. Fife said this morning in his speech after Mr. Darlington's paper I heartily agree with. It was thought by some of the speakers that a standard was not possible, but my contention is that if a raiser of a new Rose brings forward a new variety, the National Rose Society should say to him, "What Rose does your new variety supersede? You have raised this Rose as a new and improved variety, and you must tell us what Rose it beats and what Rose it should displace." Put the Rose that he says he has obtained alongside of the other Rose, and grow the two together, and then it will be possible to tell what the value of the new Rose is. It is practically impossible to judge a Rose and know its character on a bench. Our good friend, Mr. Easlea, was asking about the lack of Rose raisers, and I can hardly agree with him. The great old Rose raisers may have died out, but the good old Roses have not, because if you go to any Rose show there are certainly more seedlings for awards to-day than there ever were. The modern raisers may be more modest but they are certainly there. I think that the seedlings this year in the show were smaller in number owing to the late season, but last year I counted 64 seedling Roses put up for award and I think that is a record.

There is one thing that I think ought to be done, and that is to insist, in connection with the new trial grounds of this Society, that if a man raises a Rose, he should say what Rose he has beaten. The two should be planted alongside each other, and if it is the case that the man has beaten the older Rose, then all honour should be given to him. The whole thing now is that we want fragrance; we want long stems; we want flowers of the "Madame Butterfly" class, flowers of the same type and not much bigger. We do not want big Roses that will not open, but we want perfect Roses. Mr. E. J. Holland said this morning that it was impossible under present conditions to get further progress, and believed that if the National Rose Society would make a stringent rule, and absolutely refuse to look at any Roses

which did not come up to the standard that exists at present, raisers would produce such Roses. There is no difficulty about the matter at all. If a raiser knows that there is a certain standard he has to live up to he will work to that standard and try and raise something to beat it. At the present moment there is no standard and nothing to work to, with the result that we have been flooded with duds.

Now I will try and do a little prophesying. Scotsmen are not in the habit of prophesying—they usually follow the prophets. I believe, as far as I can follow the matter, that the future of the Rose will be a great one. There is only one other flower that I have any fear about as a competitor of the Rose, and that is the sweet pea. If anyone can tell me any other flower or shrub that will give you in your gardens the same number of cut flowers from the month of June and almost up to Christmas, in a mild winter, that will beat the Rose, I shall be glad to hear about it. If we can get our Society to make a standard and get raisers to produce those flowers which the growers want; if we get a dozen or two good type of Roses with long stems, plenty of perfume, beautiful flowers that will last a decent time—if we get Roses of that character in our gardens, we can cut them every day; you can go out and cut them every morning, the same as you can sweet peas. If we can get Roses like that and let people know that they are in existence, we are going to make the Rose even more popular than it is at the present moment. Our friend, Mr. Courtney Page, told me that he hoped to see the membership of this Society numbering 25,000. If he will only get this done with his trial garden, and let the British public know that there are Roses of the type I am asking for, he will see the membership of the Society 50,000 before he is five years older. I know what I am speaking about. If the Society laid down that standard and said, "You must beat that," surely there are brains enough amongst the Rose breeders in Great Britain, America, Germany, France and Holland to-day able to produce those Roses. These Roses can be got—we have got splendid varieties already, and it is only a matter of improving upon them. I am quite sure that once that standard is laid down by this Society, these Roses will be forced upon them.

DISEASES OF THE ROSE.

By JOHN RAMSBOTTOM, O.B.E., M.A., F.L.S.

It is not possible in a communication so short as the one I have been asked to make to discuss all the fungi which are recorded as damaging the Rose, or even to enter into detailed accounts of the principal diseases. It has seemed best, therefore, to restrict myself to pointing out gaps in our knowledge of the life-histories of Rose parasites where investigation may bring out facts of importance to the grower in his efforts to obtain plants without blemish.

The Rose is admittedly one of the most sturdy plants, and yet we have to account for a considerable wastage.* There is undoubtedly scope for investigations on what is known as "Die-back," *i.e.*, the death of the shoot from the tip downwards, and on "Canker," where there is an ugly, gaping wound which may be partly or wholly occluded by attempts of the Rose to repair the injured tissues. Our knowledge of both die-back and canker is very hazy.

There are probably several kinds of die-back. The same result, so far as the rosarian is concerned, may be attained in two ways. The first, which appears to be the more common, is where the ends of the branches die owing to physiological reasons; the plant may have been moved and the root action temporarily interfered with in some way, or the tender tips of the shoots or opening buds may have been killed by frost. It is obvious that if normal root action is restored the growth of the Rose will be renewed; also it is rare, I think, at least in this country, for Roses to be killed by frost alone. No matter what causes the death of the tips, it is usual—one might almost say inevitable—to find fungi on the dead wood. It is immaterial whether or not a fungus

* Apart from British grown Roses, about five million plants are imported annually from the Continent.

occurs on the dead end of a Rose branch if it is going to remain as a saprophyte. However, when a fungus has got going on a dead part it is sometimes an easy step for it to pass over to still living tissue and cause damage there, and even the death of the branch and ultimately the whole plant. Frequently one receives for examination specimens in which the ends of the branches have been killed by frost and have then been attacked by *Botrytis cinerea*, a saprophytic fungus which occurs in every garden, and the branches killed back through their whole length.

There are many fungi to be found on the dead ends of branches. The majority of them appear to be harmless, but there are occasional ones which must be regarded at least with suspicion.

Ramblers which are not properly pruned show very frequently the sort of trouble to which I am referring, the tips dying off in Spring, and serving as the jumping-off ground for some fungus or other. We are uncertain at present whether a die-back primarily due to fungal attack occurs, *i.e.*, an attack on a more or less healthy shoot as contrasted with a growth which begins on dead wood and passes downwards. It is certain, however, that when leaf buds are killed fungal mycelium may enter, and occasionally fungi themselves appear to kill the buds; *Botrytis cinerea* not infrequently is the fungus concerned, and it sometimes similarly attacks the flower buds. I have no information about the average percentage of total loss caused in this way. Doubtless some loss is prevented owing to Rose growers cutting out dead branches merely because of their unsightliness. For information on this point I left a few ramblers untended for the last three or four years and these now have few or no leaves; compared with Roses in good condition in the same garden, the only difference in treatment has been omitting the cutting out of dead wood.

How long does a Rose plant live when properly treated, and have we the same varieties to-day which the earlier growers had? These may seem questions remote from the subject of this paper, and to have merely speculative interest. The rosarian, as such, has not the point of view of a scientist in matters concerning his Roses, any more than he has in diseases affecting him or his family. His sole desire about his Roses is to keep them alive, healthy and good-looking. A Rose variety,

when it is produced, is carried on vegetatively; it is not propagated by seed, and therefore there can be none of the rejuvenation associated with sexual phenomena. It may well be that a variety under these conditions may suffer from age and gradually become weaker and extremely liable to die-back. We know that some varieties are more susceptible to particular diseases than are other varieties; can it be that the resistance of a variety may break down and susceptibility gradually increase with age? This is quite apart from the effects of age, on what, for a better term, we may call an individual.

There are many factors which enter into a consideration of the host-parasite complex, and the subject is difficult and involved. The special points just mentioned, however, seem amenable to experiment.

Considerations of the vitality of the Rose enters to a certain extent also into the problems of canker. There is some suggestion that canker is always preceded by crown-gall, and that fungi such as *Coniothyrium* put in their appearance after the gall has broken down. I have no doubt, however, that canker occurs independently of crown-gall. It is most likely that the fungi causing canker are wound parasites, but the wound through which they enter need not be visible to the naked eye—it need be no more than an abrasion of the surface. The cuticle of the stem, so long as it is intact, forms an efficient protection against the attacks of most fungi; when it is torn, fungal hyphæ are able to enter and to penetrate tissues previously protected from them.

There is need for research on canker in Roses. The assumption usually made is that only one fungus, *Coniothyrium Fuckelii* is responsible for them in this country, but it is based on very little evidence. *Coniothyrium* is frequent on cankered stems, but other fungi also occur. What we require to learn is whether *Coniothyrium* is the cause of canker, whether it can act alone where abrasions are of the kind from which no Rose can be assumed free, and whether any other fungus is capable of so acting. The matter from a grower's standpoint is not more serious than that, although pruning is an effective treatment, drastic surgery is always regrettable; a healthy normally-growing Rose is much more beautiful than one that has been hacked about.

It will be generally conceded that in the Rose we have a much easier problem in combating disease than is usual. A properly grown

specimen will endure considerably more drastic surgical operations than will the majority of plants which are grown for their beauty.

Although this communication deals with fungi, a few words must be said about insects. Everyone knows that the leaves of plants are the laboratories, where chemical processes go on which provide most of the food needed for growth. It is obvious that if this work of the leaves is interfered with, the whole plant is weakened and becomes more liable to disease, particularly of the die-back type. It is for this reason that green-fly, leaf miners, or any other insects which affect Roses are to be got rid of; the fact that they disfigure the plant is a blessing in disguise, for disfigurement is not necessarily disease, though frequently regarded with much more disfavour. Generally speaking, it is the obvious depredations of insects which attract the grower's attention, and probably they trouble him far more than do the insidious attacks of fungi; in combating insects, however, he goes some way towards protecting his Roses from fungal troubles. For example, apart from the damage which green-fly does in sucking plant juices and, incidentally, making the Rose unsightly, it undoubtedly transfers fungus spores from plant to plant, and infection is made peculiarly easy on account of punctures and secretions. By keeping Roses as free as possible from insects this secondary fungal attack is prevented. I am not suggesting that fungous disease can be obviated entirely by preventing insect attack, and consequent transference of spores, because, normally, spore dispersal by wind is much the more common. But even with wind dispersal it should be remembered that many Rose disease fungi are wound parasites, and though the cuticles may be ruptured in all sorts of ways—even by a plant's own prickles in a wind—it should be remembered that wounds made by insects often occur at special parts of the plant, and these may be in the areas usually attacked by some particular fungus parasite; it is obvious, therefore, that wounds made by insects may be more liable to infection than those produced in other ways.

Probably "Mildew" and "Black Spot" are the two best known fungal diseases of the Rose. Mildew is by far the more common, and occurs at one time or another in all gardens. Some Roses are much more susceptible to the disease than others, resistance apparently being

partly related to leaf structure; difference in stock is also said to play a part in susceptibility, though this requires confirmation. Probably it would not be difficult to breed mildew resistant varieties, but it is doubtful whether this will be attempted as a primary object, for rosarians pay chief attention to flowers.

There are several more or less efficacious ways of dealing with mildew attacks, but some of the better ones result in disfiguring the Rose for a longer or shorter period. If we had resistant varieties, the mildew problem would not arise; but as those we value are good, bad and indifferent from the point of view of immunity, the problem resolves itself into keeping the attack down as much as possible, with the minimum of expense and unsightliness.

One of the important points which requires investigation is how infection begins in a garden. This, incidentally, is a constantly recurring question in the study of plant diseases. Most fungi, like plants, have their period of active growth and of dormancy. They usually have a stage which flourishes in the warm season of the year, and which serves for rapid dissemination. Rarely is the conidial stage able to withstand the rigours of winter, and another stage of the fungus, adapted for this purpose, is frequently produced.

Now the resting stage of mildew rarely occurs on cultivated Roses, so far as I have observed, though it is very common on wild Roses; the difference is probably merely because mildew is not allowed to develop abundantly on garden Roses. We have to account for attacks in Spring and early Summer, when there are no obvious means of carrying over the fungus through the Winter. It may be that the first outbreak in Spring starts from wild Roses and passes on to cultivated plants, but this cannot very well occur in town gardens, and we have no clear evidence that it ever does so. Just as there are races and strains of Roses, so there are strains of many species of fungi, and sometimes such strains differ in their pathogenicity to host plants. We know that strains exist in some mildews, but so far no work in this direction appears to have been done on Rose mildew.

How does the fungus overwinter in gardens? This is a problem that awaits solution. It may be that the mycelium can perennate within the buds. This has been shown to occur in apple mildew, and

it may be so in Rose mildew. Various mildews have had their overwintering attributed to specialised cells of the mycelium, which are able to endure Winter conditions and germinate in Spring. If these chlamydospores exist in Rose mildew, they must be scarce on the cultivated Roses of many gardens, for mycelium itself can rarely be seen there; if an enthusiastic grower could think of no other method, he would probably wipe off any mycelium which remained on his Roses after leaf-fall.

The presence of perennating mycelium in Rose buds has been recorded, and this observation is well worth confirming, for if we know definitely that the fungus mycelium lies snugly within the bud and infects the young leaves as they unfold, and can ascertain the period when the buds become infected, then, by taking special precautions at that period, we can prevent bud infection, and so do much to reduce the amount of mildew. The severity of mildew in a garden depends largely on the number of primary infections, and if these could be reduced to a minimum a general attack would probably be impossible.

Black Spot is the other trouble of which growers in this country mostly complain. This disease is not so universal in its distribution in this country as is mildew, and in certain districts appears to have less intensity. Consequently it is regarded by different rosarians in various ways, some considering it as their chief trouble, others thinking it of no account. It is not my purpose here to detail the characteristics of the disease; they are well known, very characteristic and easily recognisable. Roses differ in their susceptibility to the disease, the varieties with tender foliage usually suffering most.

The problems which concern the Rose grower are how to prevent the unsightly marking of the foliage of his plants with the subsequent defoliation and how to prevent the recurrence of the disease. A number of fungicides and dusts have been advocated, and several of them are efficacious in keeping down an attack when once it has started, or as prophylactic treatment in gardens where the disease is known to occur. It is general knowledge that many treatments serve both for black spot and for mildew, though the causal fungi have no systematic relation and, moreover, differ very much in their relation to the host,

the mycelium of the first being chiefly within the tissues of the leaf, that of the second almost entirely superficial. The earliest appearance of the disease in the year is due either to the fungus overwintering on fallen leaves, or in pustules on the stem. It would seem that both these sources could be eliminated by thorough sanitation and a careful examination of the stems during the dormant period with an attendant use of secateurs. The stage of the fungus found on growing leaves is the conidial or summer-spore stage. An ascospore or Winter resting spore stage has been recorded in America on fallen leaves, but so far has not been found in Europe. If such a stage exists here it may have an important bearing on the problem of the primary attack of the fungus; if it does not occur, it is an addition to the interesting data which are accumulating on the possible different behaviour of the same fungus in widely-separated geographical areas.

It probably requires a trained eye to discover the so-called *Diplocarpon* stage, and apparently few mycologists so far have looked for it. Another point which warrants attention is the ascertaining of the frequency or otherwise of stem infection. Its occurrence was overlooked until comparatively recently, but until we have more definite knowledge of the frequency of its occurrence all that need be said is that where stem pustules occur they should be cut out.

Every grower sometime or other has mildew; this is certainly not so with Black Spot. Some Rose varieties are almost invariably affected with some growers, and others appear to be more or less immune. I think it would be useful if information could be obtained from all over the country giving, over a number of years, information about the presence or absence of the disease from gardens of which the essential features about soil, situation, rainfall and so on are stated, and where the disease is present, facts about its frequency and the relative susceptibility of different varieties; this, together with an account of the efforts made to keep the disease in check and details of the primary attack of the fungus, should furnish data which, when sifted, would suggest the best lines along which to combat the trouble.

Rust is another disease which is sometimes common. Wild Roses are exceedingly liable to attacks of rust, and the appearance of infected

cultivated plants suggests at times that the disease has spread from the stocks. However this may be it is certainly not the usual way by which they become attacked. (Incidentally it should be mentioned that in the examination of diseased Roses it is well to carry one's observations to the stock; there is a great temptation to omit this.)

At first sight one is tempted to attribute infection of garden Roses to the spread of rust from wild Roses, just as one is with mildew. Here again, however, the problem of strains comes in. Many species of rust consist of strains or races which, though morphologically practically indistinguishable are very specialised in their parasitism, and are able to infect only certain hosts. Is the *Phragmidium* which attacks garden Roses able to attack every species and variety of Rose, and is it just the same as the one on wild Roses, or are there numerous strains highly specialised in their parasitism? We have no precise information about this.

The means by which rust overwinters do not present the problems met with in mildew and black spot. Resting spores (teleutospores) are formed on the leaves, and frequently the mycelium persists in the stem. This gives a clear indication of the way in which to prevent the disease carrying on. The problem, therefore, is how to prevent the primary attack.

The point of view which I think is worth stating is that all plant disease may be looked upon as presenting two main problems. The first is concerned with what I have termed the primary attack, by which I mean the first appearance of a disease in a garden; the second is concerned with the overwintering of a disease, or its persistence from year to year.

How does a disease arrive? This is a problem which is special to each fungus. If there is a likelihood of a disease appearing, how can it be prevented? When it has appeared, how can it be eradicated? These are the problems solved by the experience of the grower and the intelligent use of scientific methods. It is not always realised that if disease can be prevented by spraying or other treatment it is far more satisfactory and economical to do this than to wait until the disease

has become rampant. On the other hand, many sprays and dusts disfigure foliage and if they can be done without and the plants remain healthy, so much the better. However, prophylactic measures should not be omitted when there is a recent history of disease in a garden.

The second problem, that of overwintering, complicates matters. If we have knowledge about the methods by which a particular fungus is able to pass through the rigours of winter, we can then devise means of attacking that stage and so prevent a recurrence of the disease the following growing season. Frequently this amounts only to what is called sanitation, that is the removal of dead leaves and spare parts of plants lying about the garden. It is certain that if as a routine procedure all Rose litter were raked up and burned there would be less reinfection with subsequent disease.

It is never certain how far some fungi which have pathogenic capabilities are able to continue their existence as saprophytes, and the substratum most favourable for them is usually dead portions of the host plant. Burning garden refuse, therefore, is infinitely better than attempting to bury it.

The other diseases of the Rose, known in this country, are not general, though one or two, *e.g.*, downy mildew (*Peronospora sparsa*) which defoliates Roses under glass and crown canker (*Cylindrocladium scoparium*), which has been recorded from plants imported from America are serious troubles.

There are many suggestions that fungi which attack raspberries, loganberries and other rosaceous plants may also cause disease in Roses. This possibility is one that should be borne in mind when such plants are diseased in a garden where there are also Roses. It is probable that with more intensive study several new Rose diseases will come to light. American investigators have added new parasites to the list during the last few years, and doubtless some of these and others in addition are to be found in Europe. Most of them are of the stem canker and die-back type, and some are serious diseases. Leaf spots are also very disfiguring, and sometimes interfere seriously with the health of a plant.

There are several fungi which act in this way, sometimes forming shot holes; we are ignorant of the number of these fungi occurring in Britain and Europe generally. Where they occur spraying is usually a satisfactory way of keeping the disease in check.

I am well aware that most of what this short communication contains is fully known to most of you. Further, I realise that a detailed scientific description of Rose diseases is of no more general interest than would be the statement that an infirmity from which you suffer is due to some specific bacillus. When a man is ill—I speak of ordinary human beings—his only interest is to become well; when a normal grower has his Roses diseased his desire is to get them back to health; his interest in the fungus or insect causing the disease is a derived one with a view to learning how to achieve a cure. Several rosarians I know are interested in mycology, but it is not because they grow Roses !

I have attempted to point out many gaps in our knowledge of the fungus diseases of Roses with the object of suggesting that some effort should be made to bridge these for the benefit of the growers of Roses. Rosarians are in these days numerous and well organised. They have, as individuals, their ideals of good cultivation; as a body they surely have the obligation of encouraging research work on matters which affect Roses, or, as I prefer to put it, they should have a benevolent interest in Roses; this for the reason that, whenever the blessed word research is mentioned to a meeting such as this, it is usually regarded as an appeal to subsidise a body of workers to spend their time tackling problems from a broad standpoint, with a remote hope that some of the results obtained may be some practical use to those to whom the appeal is made. If the money was obtainable, I must admit that I should have no hesitation in asking for it for general research of this kind.

What can be done? There is much that Rose growers can do in supplying information, and although the study of plant disease is not legally circumscribed as is that of human disease, it requires men of special training to understand the significance of certain facts and to find out others. With so many interested in Roses it should not be

difficult to obtain funds for the investigation of definite problems such as those mentioned in this paper. It would be one of the satisfactory results of this week's great meeting if the National Rose Society would undertake the gathering of information from its members on the incidence and severity of diseases in this country, and the diagnosis of doubtful cases with the object of arranging for the investigation of special disease problems or general physiological ones. In making this suggestion I have in mind the object of the National Rose Society :—

To encourage, extend and improve the cultivation of the Rose.





A BASKET OF KIRSTEN POULSEN (Poly.).



COLOUR IN THE ROSE GARDEN.

By Mrs. H. R. DARLINGTON, Potters Bar.

Writing under leaden skies surrounded by the gray stone buildings of Oxford, it would seem to me that no quality a flower possesses can be so important as that of Colour.

Many flower-lovers maintain that form is a higher attribute than colour. Possibly in southern countries where sunshine and light are abundant, this may be true. It may also be true regarding cut flowers, and certainly as to flowers for Exhibition which are examined closely and critically. But our English gardens, even in the height of Summer, may often be sunless for many days in succession; therefore, colour is here of supreme value.

English people love colour. From a spectacular point of view, khaki is a poor substitute for the scarlet uniform of by-gone days, and though the men of modern times allow themselves little latitude in the matter of colour, except in their ties, women make up for this deficiency by the choice of vivid and brilliant tints which, with a sense of the necessity of cheering up a rainy day, they now extend to their mackintoshes and umbrellas.

Go into an old cathedral, or into one of the college chapels on a gray Winter's day, and see what a cheering effect the beauties of a stained glass window can have. It is not the window which has the finest picture, but that with the most brilliant yet mellow colouring which claims our admiration. The drawing in modern stained glass is often far finer than that in the windows of the thirteenth or fourteenth centuries, but it is rarely that a modern window can give us those glorious hues of ruby, sapphire, emerald and amber which gleam so softly and shed such radiant light on the nave of York Minster or the choir of Wells Cathedral.

In an article on "Colour in Roses," which appeared in the Annual for 1919, I wrote of the arrangement and position of roses in the garden from a colour point of view, and I do not propose to discuss this again.

Only yesterday I heard the story of a man who, living in a somewhat dismal town, had a great love for colour, for the glories of sunrise and sunset, and the deep blue of a midnight sky, for the radiance of the feathers of birds and the petals of flowers. He used to wander through the streets, picking up any chance pieces of coloured glass he might find in the gutters, and, reaching home, he would arrange them on his window-sill, that passers by in these dingy streets, chancing to look up, might be cheered by the shining of the scraps of coloured glass. This man, with his craving for beauty and radiance, was much missed when he quitted that dreary town, but he left behind him an awakened sense for "Sweetness and Light" (to use Matthew Arnold's phrase) among those with whom he had lived.

We appear to have wandered far away from our Roses, but in reality this digression bears out my contention that colour is of supreme importance in an English Rose garden.

I have lately been reading again Mr. Foster-Melliar's "Book of the Rose," a book packed with information, and second to none as a guide to Rose growing.

The author would join issue with me as to the relative importance of form and colour, because he looks upon the Rose as a flower that "should stand in a vase by itself as a Queen should," and tells us point blank that he would leave "the most perfectly arranged Rosarium for a few plants in a bed in the kitchen garden with cabbages on one side and onions on the other, if there alone could be found the perfect blooms." Again he writes: "With all the best Roses I should not wish for or expect any general display at a distance, but come close and be content if I can find but one perfect bloom"; he sums up by stating emphatically that:—

"The value of the Rose is in the glory of its individual flowers."

Granted. But surely now-a-days the value of the Rose above all other flowers is that it can give us perfectly-formed blooms for Exhibition or for specimen vases, and can also fill our gardens with colour and fragrance from early Summer to late Autumn. Of what other flower can this be said, and could it be truly said even of the Rose thirty years ago?

In the last quarter of the nineteenth century the Hybrid Perpetuals and the Teas were the two principal groups of Roses grown. The H.P.'s needed vigorous disbudding to enable them to produce the superb blooms of which Victor Hugo and Horace Vernet were capable ; therefore, if grown in a garden where they did not receive constant attention, they were not decorative plants.

In grace of form and beauty of outline the pure Teas of that time are still unsurpassed, but they were not hardy enough to grow in exposed positions, and they produced their best blooms on dwarf standards, not a specially decorative fashion from a garden point of view. Moreover, delicate and lovely as were the blooms of such varieties as *Souvenir d'Elise Vardon*, *Catherine Mermet*, *Cleopatra*, and many others, they did need that "coming near" which Mr. Foster-Melliar indicates.

A few years ago we were taken to see that wonderful wall and terrace garden near Bath, made by Mr. Hill Gray, of which there is an illustration in Mr. Foster-Melliar's book. I confess to having been disappointed.

A lovely view over the valley, massive walls of gray stone. What a glorious situation for a Rose garden !

The terraces were planted in long straight lines, hundreds, nay, thousands, of plants of Tea Roses in only a few varieties. Had we seen the garden on a sunny day in July instead of on a misty September afternoon, the effect would certainly have been very different, and the charm of the individual flowers the result of expert cultivation might have been sufficient compensation for the lack of brilliant colour. I remember being bold enough to hail with joy a bright distant gleam of orange pink, and on enquiring what that lovely Rose might be, the gardener, scarcely giving it a glance, intimated that it was "just a Hybrid Tea," and not of any account, as the blooms were thin and fleeting. The high wall at the back of the terraces was almost covered with that beautiful *Noisette E. Veyrat Hermanos*, the deep apricot blooms just tinted with Rose, and the abundant glossy foliage made a fine background. With what delight one could have filled those carefully-prepared borders with the glowing cerise, orange, apricot

and golden tints of such modern varieties as Betty Uprichard, Shot Silk, Emma Wright, Padre, Los Angeles, Lamia and Mabel Morse, also with the brilliant scarlets of K. of K., Lord Charlemont, Hortulanus Budde and Mrs. C. E. van Rossem. For the softer shades we should have looked to Ophelia, Butterfly and Westfield Star, and here we have the perfection of form so dear to the hearts of Mr. Foster-Melliar and Mr. Hill Gray, and there is no doubt that brilliance of colour has not always been united with refinement of form. Nature is lavish, but she still seems loath to give to the same Rose perfection of shape, colour and fragrance.

The crossing of the Austrian Briar with the Hybrid Tea brought new Colour into our Roses, but what they gained in Colour they, to a certain extent, lost in form—the beautiful point typical of our best hybrid Teas was replaced by a flatter shape with low confused centre such as we have in Soleil d'Or and Rayon d'Or. But Nature does not have it all her own way in the world of flowers, and our hybridists soon set to work to improve the shape of the so-called Pernet Roses, and they can already claim a large measure of success. Soleil d'Or and Rayon d'Or are superseded by such varieties as Los Angeles and Shot Silk, which, though they may lack the grace and refinement of the Tea Rose, yet in addition to superb colour they have a certain shapeliness which will encourage the hybridist to continued efforts. That wonderful variety, Dame Edith Helen, comes very near the perfect Rose. It has an erect habit and firm stem, freedom and continuity of bloom, and a large well-shaped fragrant flower of deep Rose pink colour. The shape is sometimes a little heavy, the colour perhaps a little hard. At any rate, it does not as a cut flower blend well with other Roses. Nevertheless, Dame Edith Helen gives great promise of what the Roses of the next decade may bring.

Has Mr. Foster-Melliar prevailed after all? Is the importance of Form gradually asserting itself as I write?

If so, it is because I realize that hybridists during the last ten or fifteen years have been fully alive to the value of Colour. They know that whereas a quarter of a century ago members of the National Rose Society were counted in hundreds, now their numbers have risen to

15,600, and they also know that for one enthusiast to whom the beauty of the individual flower is the chief attraction, there are fifty who ask first that their Roses should give colour and brilliancy to their garden. Speaking generally, the hybridists give us the qualities we demand. A few years ago there was an outcry that modern Roses were losing the quality of fragrance. The hybridists set to work to remedy this defect, and gave us Ophelia, Madame Butterfly, Shot Silk, Etoile de Hollande, Westfield Star and Dame Edith Helen, which are the forerunners of others equally fragrant, notably Fascination, Flamingo and the "Daily Mail" Scented Rose.

Before long we shall have a Margaret McGredy of good form, and which retains its vivid colouring, a vigorous Lady Inchiquin and a fuller yet more pointed Etoile de Hollande.

As the surest way of convincing my readers of the splendid colour effects that can be given by Roses alone, I should like to introduce them to a small garden in Canterbury, which I have the privilege of knowing well. This garden is practically all Roses. In the front, tall standards of Hugh Dickson and a few of Madame Edouard Herriot rise above the palings to greet the visitor with the sight and scent of their abundant and brilliant blossoms.

Passing through the house, it is still as with Browning's Patriot, "Roses, Roses all the way," and from the drawing-room window there is access to a delightfully laid-out parterre in which the beds of Roses seem to vie with one another as to which can add most to the general effect. It is no exaggeration to say the Rose garden is a blaze of colour, not giving the brilliant but rather crude monotonous effect that can be easily obtained from beds of scarlet geraniums or salvias, but, if I may revert to my original comparison, glowing with the beauty and charm of an old stained glass window, a charm which comes from the harmonious blending of rich colours.

Here are beds of Avoca, Betty Uprichard, Mabel Morse, Lady Inchiquin, Mélanie Soupert, Hortulanus Budde, Isobel, Mrs. Henry Morse, Frau Karl Druschki, Louise Crette and many another favourite, all are given the incomparable setting of grass, and are so arranged that the colouring of one may enhance that of its neighbours.

Thanks to the rich alluvial soil and to the skill and unremitting attention of the owners of this garden, the Roses are not only a feast of colour, but many are very perfect blooms, some of which may be met with again in the prize boxes at the local Show.

At the far end of the lawn there is a wall of old gray stone, clothed with the glossy foliage and rosy salmon and blush pink sprays of Dr. Van Fleet, François Juranville, René André and other wichuraianas. This garden as a whole is an object lesson in what wonderful colour effect can be produced, with skill and taste, in a comparatively small space by planting only Roses. In my opinion it is permissible, even desirable, to associate such dwarf-growing plants as violas with one's Roses, because the violas will start flowering long before the Roses, and if the colours are carefully chosen, will enhance their beauty. But this is a vexed question not to be discussed in this paper, whose only object is to show that the Rose can furnish our gardens with a wealth of colour and beauty that can be obtained from no other flower over so long a period and in so small a space.



A BASKET OF GEORGE DICKSON (H.T.).



ROSES AS CUT BLOOMS.

By Mrs. F. A. SIMONDS, Wokingham.

An old proverb runs :—" Every month has its flower, every flower has its hour," but in England to-day every month may have a Rose, and the Rose's hour is always. From early May to the middle of October we talk of this Rose or that, of one species or another, and though from the end of October till May a Rose is just a Rose, yet then we rejoice in a flower, which in the hour of her triumph we should probably scorn. Books, articles and treatises innumerable have for many years past been written round the Rose, and every year fresh varieties are produced, new methods for their propagation or cultivation evolved and discussed, while Rose growers send out bigger, better and yet more catalogues. All these, however, concern the growth and cultivation of the Rose, and very little is written about the cut flower.

In this article I am purposely refraining from any attempt to discuss the arrangement of Roses indoors, that has already been done, neither do I propose to refer to cut Roses as Show blooms, these, together with Roses for table decoration, come under a different heading. The cutting and arranging of Roses for Shows is an art in itself, and the decorative arrangement of Roses for dinner tables depends largely on the rules that govern each particular Show, as, for instance, the use of greenery other than its own foliage, the size and kind of tables and vases that are allowed, and so on. But this may be the opportunity for putting in a plea for a competition in decorated mantelpieces, a suggestion that comes from New Zealand, on which Roses can be arranged in an entirely different manner from table decoration and with quite a different effect.

The mantelpiece is of the simplest construction, just a piece of board nailed on two uprights. I have seen this competition carried out at a village flower Show with great success and much charm.

The arrangement of Roses in bouquets generally follows conventional lines, and this applies equally to sprays and baskets.

The wearing and giving of Roses and the use of them for decoration is an age-old custom. It is recorded of Nero that he spent thousands of pounds on Roses at his feasts, and undoubtedly the Romans took a delight in crowning themselves with Roses, the dishes at their feasts were garnished with them, and their tombs were surrounded by Roses and inscribed with petitions to the passer-by to scatter Roses on their monuments. The custom of bringing Roses and other flowers to strew on graves has come right down through the centuries. Sir Philip Sidney asks for "a rosy garland" for his dead love, and Milton calls for musk Roses amid many other flowers "to strew the laureate hearse where Lycid lies."

In religious festivals cut Roses are largely used. At the Fête des Roses held annually in certain villages in France, notably in Haute Savoie, High Altars entirely covered with Roses are erected at each end of the main street, while solemn services of Benediction are held, and a procession made from one Altar to the other.

A photograph of the Pope's Golden Rose appeared in a recent issue of "The Rose Annual," and this coveted gift is of very ancient origin. Again a fifty years' old article in the "Cornhill," describing an early Spring in California, tells how, "on Easter Sunday each Church in San Francisco strove to outdo its neighbour in its profusion of Roses."

In England the many vagaries of our climate compel us to spend, even in Summer, a considerable amount of time indoors, and the value of the cut Rose comes home with fullest force then. We cannot spend our entire time in our Rose garden, but it is a real joy to bring Roses into the house and fill it with their beauty and their scent. They should, in Summer time, be cut very early in the day, and, when possible, plunged in deep water for at least a couple of hours before arranging them in vases. It is also wise, when they are arranged and put in the place they are meant to occupy, to fill the vases up to the very brim twice daily, in order to keep the stalks as much in the water as possible.

Even then their life is all too short, and the arranging of cut Roses in June, July and August is an almost daily occupation if we would have them looking their freshest and smelling their sweetest.

Certain Roses, it is true, will live longer than others, and such Roses as Irish Elegance or Irish Fire Flame have a wonderful lasting capacity. A long branch of these, cut just when the lowest buds are showing colour, will last, with careful changing of the water, for nearly a week, and every bud will become a flower. Even the top ones, which when picked wore tight green jackets, will unfold themselves, although it must be admitted that this top flower is a very pale imitation of the glorious red gold bloom beneath. Many of the single Roses will open out in water, if picked in the bud, and last a correspondingly long time. Isobel, for instance, will live three or four days if picked just before breaking into bloom. Some of the rambling Roses again, notably Blush Rambler, have a wonderfully long life in water, and the little polyanthas, Coral Cluster, Jessie or Orleans will live the longest of all, but in every case the life of the cut flower depends on its being cut at the right time, not only of day, but of its own life, and this one can only learn by constant experiment and practice.

As the Summer and Autumn pass, we are less particular about the size and perfection of our cut Roses (though our pride at being still able to cut them increases with every frost), and even a slightly frost-bitten Rose (whose damaged outer petals may be carefully removed) will live a surprisingly long time in a warm room. Again, as Spring appears, we welcome the first homely buds of some such dear old Rose as "Glory be to thee, John," with its fat, thick petals, the first blooms of which never really come out properly. We cut and bring them in with pride, feeling convinced that now at last "Summer is a-cumen in."

It is a strange thing that so much is written of the growing Rose these days and so little of the cut one, and yet a study of old books and poetry reveal so many uses for the cut flower, but give little or no indication of the old methods of growth.

Both are lovely, there is the unending joy of growing, and to so many too, the unending joy of cutting and arranging, for just as the Rose garden is to almost all of us, the most beloved place in the garden (indeed, sometimes it is the whole garden), so our cut blooms indoors are the finishing touch to each room, crowning the stateliest, furnishing the barest, and bringing pleasure to the humblest English home.

CHAPLIN'S PINK CLIMBER.

(H.T.)

Raised by CHAPLIN BROS., LTD., The Royal Nurseries, Waltham Cross.

This is quite one of the best Climbing Roses we have had since the advent of Paul's Scarlet Climber, of which this is a seedling. The habit of growth is medium, the plants reaching a height of about 7 feet. The blooms are fairly large, carried in clusters, with pretty golden stamens. The colour is a soft pink. The foliage reminds one of American Pillar, bright, shining green, free of mildew. The raisers very considerably gave the parentage of this variety—Paul's Scarlet Climber \times American Pillar. In Commerce.



CHAPLIN'S PINK CLIMBER (H. wich.).
GOLD MEDAL awarded to
Messrs. CHAPLIN BROS., Waltham Cross.



TWENTY-FOUR ROSES FOR GENERAL GARDEN CULTIVATION.

H. R. DARLINGTON, *Past President.*

These twenty-four Roses were selected by a number of voters, who were asked, in addition to selecting the varieties, to give particulars in the case of each variety selected of (1) the general habit of growth, (2) the foliage and its liability to disease, (3) the commencement and continuity of blooming, (4) the decorative value, lasting quality of the flower, the substance of its petals and fragrance, (5) the lasting qualities of the blooms when cut, (6) the lasting qualities of the colour and effect of sunshine and wet, (7) the nature of the soil and situation of the beds from which the voter had derived his or her experience, and (8) general remarks. The article which follows is an attempt to summarise the returns sent in.

Of the Roses thus selected, nine have more or less pronounced and satisfactory fragrance, and in fifteen it is slight or absent.

Thirteen are more or less full Roses with a fair number of petals, and eleven are thin Roses, more or less semi-double. Taking next the colours, we find the list contains four red or crimson, nine various shades of pink, four mixed colours between pink and orange, and seven yellow or orange. There is no white, and it seems clear that brilliance of colour has been the dominating influence in the selection.

<i>List of Voters.</i>				<i>County.</i>
Mrs. H. R. DARLINGTON	...	...	...	Middlesex
Mr. G. BURCH	...	...	...	Suffolk
Mr. WALTER EASLEA	...	...	...	Essex
Mr. J. G. GLASSFORD	...	...	...	Lancashire
Mr. J. N. HART	...	...	...	Middlesex
Mr. F. S. HARVEY-CANT	...	...	...	Essex
Mr. JAMES KERR	...	...	...	Ayrshire
Mr. LEWIS LEVY	...	...	...	Kent
Mr. W. E. MOORE	...	...	...	Middlesex
Mr. H. MORSE	...	...	...	Norfolk
Mr. OWEN MURRELL	...	...	...	Shropshire
Mr. B. W. PRICE	...	...	...	Gloucestershire
Mr. NORMAN LAMBERT	...	...	...	Yorkshire

The twenty-four Roses selected were as follows :

Betty Uprichard	} 13 votes	Angèle Pernet	} 8 votes
Etoile de Hollande		Christine	
Shot Silk		Ophelia	
Emma Wright	} 12 votes	K. of K.	} 7 votes
Mme. Butterfly		Lady Inchiquin	
Mrs. Henry Morse		Mrs. Barraclough	
General McArthur	... 11 votes	Rev. F. Page-Roberts	
Lady Pirrie	} 10 votes	Caroline Testout	} 6 votes
Los Angeles		C. E. van Rossem	
Mabel Morse	} 9 votes	Mme. Abel Chatenay	
Mrs. Henry Bowles		Mme. Edouard Herriot	} 4 votes
Mrs. Wemyss Quin		Independence Day	

Betty Uprichard. H.T. A. Dickson & Sons, 1921.

The voters are unanimous in recommending this Rose. The growth is vigorous, the plant throwing up erect shoots, 18 to 24 inches long, and when the first flowering is over, other shoots nearly as long are produced carrying the second crop.

The foliage is a good dark green, not specially liable to mildew or black spot.

The plant comes into flower early, those who give me dates of first flowering varying from the 15th to the 23rd June. The majority

of my correspondents call its flowering continuous, but I do not think this is correct, and I agree with a substantial minority who point out that a long period elapses between its flowerings. This is a natural consequence of the long stems on which the flowers are borne, some considerable time being required to produce this growth before the next batch of flowers can be obtained. This is a defect in this Rose, and, to minimise it, I have two beds of Betty Uprichard, one of which I prune early in the pruning season, and the other late, so that one bed may succeed the other and fill in the gap. I adopt a similar course with General McArthur, which has the same fault.

Last year (1928) nearly all the first buds of Betty Uprichard were blind, so that it was late in the season before I had any show of flowers which, even then, were not so good as in previous years. This was no doubt owing to the severe late frosts which happened to affect my garden with unusual severity. I have not known this occur before last year. The flowering goes on late into Autumn, a batch of flowers often being obtainable in November.

The flower has some fragrance, but most of my correspondents regard it as only moderate. Four of them, however, call it very fragrant, and two find that it reminds them of the verbena. I myself class it among the Roses deficient in fragrance. All are agreed as to the highly decorative character of the flower. The lasting quality of the flower is not great, partly because the petals are too few to make a full flower, but if cut as a bud it opens well in water, and the colour is then usually better than when the flower opens on the plant.

The colour is effective by the contrast between the inner and outer sides of the petal. The brilliant colouring is rather rapidly spoilt by sun, and turned to a somewhat uninteresting pink, but it stands rain well, and hence the early Summer and Autumn flowerings are usually better than that of August.

Mr. Burch advises that flowers cut for the house be arranged in a black bowl.

Several voters recommend it as a standard. It may be regarded as one of the series of bi-colour Roses, Mrs. E. G. Hill, Edith Part,

Betty Uprichard, in which the colour has gradually deepened. This, together with the vigour of the plant, has made the last the most popular of the series.

Etoile de Hollande. H.T. Versehuren, 1919.

A unanimous vote. The bush is generally of a branching habit, but in its second growth it throws up one or sometimes more strong stems—a vigorous plant.

The foliage is good, and of a dark green which contrasts well with the flowers.

The flower is a fine dark red. Mr. Hart describes it as having a bright scarlet showing through an almost black velvety shade. It flowers with fair constancy from June to October, but several of my friends find the number of flowers per plant rather few, and I myself not infrequently find the beds without flowers during the season. This, and the fact that the form of the flower leaves a good deal to be desired, are the defects of this Rose. The flower has a glorious perfume, as strong as that of Hugh Dickson, but somewhat different in character. Mr. Levy calls it a wonderful and curious musk-damask perfume, and that, I think, describes it. The description often assigned it is that of a muscat grape.

The substance of the petals is good, and the flowers stand wet well. In sun they do not “blue” much, as is the fault with so many red Roses, but become duller in colour. Hence it is essential, when picking for decoration, to cut the flowers quite young.

As with most, if not all, red Roses, the early and late flowerings are the best.

Most of my friends agree in calling Etoile de Hollande our best crimson bedding Rose, but some would like to see it a little fuller and brighter, others somewhat freer in flowering, while to me the want of form in the open flower is a serious defect.

It is, however, an easily managed plant, and this, and its fine colour and wonderfully sweet perfume, have assured its popularity.

Shot Silk. H.T. A. Dickson & Son, 1924.

Here, also, we find unanimity among the voters. The habit of growth is strong, bushy and branching, a large number of stems being produced by each plant. The foliage is glossy, beautiful and abundant, of a lighter green than most Roses of its class. It is free from mildew, but several of my friends have noticed some tendency to black spot, though it is not badly affected by this disease. The latter view accords with my own experience.

The appearance of the flower is well described by its name, the colour is a mixture of pink, orange, and salmon. Mr. Hart describes it as bright cerise, overshot with orange, flushed rose and buttercup yellow. It is extraordinarily variable in different flowers, often of the same plant, and in different stages of their growth, the older flowers becoming pink, and not infrequently, especially in cold weather, fading to a pale yellow. The brilliant colouring is in the young flowers, and to secure this they must be picked when just opening.

It comes into flower from the third week till towards the end of June, and thence onwards the bed is continuously in flower till stopped by frost. This virtue of complete continuity during last season this Rose shared in my garden with Dame Edith Helen.

The flowers are highly decorative, particularly when young, but their life and colour are both extremely fleeting, particularly in hot weather. It has good substance of petal, and is delightfully fragrant. Mr. Levy calls it a strong honey scent, and it has this, but other fragrance in addition. Though it is not the round damask perfume of Dame Edith Helen or Hugh Dickson, yet it is powerful, and will scent the air near the bed.

When cut, and out of the sun, the flowers last rather better than on the plant, sun being rapidly fatal to their brilliance. Mr. Morse gives them two days—still, though they have lost their brilliance, they often look quite well in the bed till they drop. They are not much affected by wet, and do not ball, though in prolonged rain they may rot.

The defect of the flower is its want of form when open, the centre petals being too short, and even in the bud the form is somewhat too rounded. Still, it is a beautiful flower, and one of the two or three which are quite indispensable. It is specially valuable as the first Rose with the Pernet type of colouring to afford a pronounced fragrance. The flower stems are stout and strong, and it repays the trouble to disbud.

Emma Wright. H.T. S. McGredy & Son, 1917.

Twelve votes. The plant makes a good branching bush of excellent habit for bedding.

The foliage is dark, good and glossy, and is not much affected by mildew or black spot.

The flowers are a bright glowing orange. They commence about the third week in June, and continue with fair persistency throughout the season.

They have great decorative value, and are much used for table decorations. They are, however, very thin, scarcely semi-double, and consequently are very fleeting, the colour is maintained fairly well.

The flowers are only slightly fragrant, and the perfume is of the Tea Rose type. When cut young, the flowers last quite as long or longer than if left on the plant. They are not greatly affected by sun or wet, but as with nearly all thin Roses, the early and late flowers are better than those which arrive in mid-season.

It is one of the best Roses of its colour for bedding, and looks well on a standard. The flowers in their early stage are scarcely distinguishable from those of Severine, but the latter become pinker as they grow older, and the habit and constitution of the plant is not so good in this country as that of Emma Wright.

The defects of this Rose are the very thin and fleeting character of the flowers and the absence of pronounced fragrance. Its merits are its bright and attractive colour, good habit and foliage, and constitution.

Madame Butterfly. H.T. E. G. Hill Co., 1920.

Twelve votes. This is one of the few indispensable Roses, and one might have expected that it would receive full marks. The plant makes a good bush, the flowering shoots are long and upright, and the flowers carried erect when disbudded. It is a good bedding Rose.

The foliage is deep green, hard and good, and not much affected by fungus. It is not carried high up the stem, which is an advantage for cutting, as the plant is not injured thereby. The flowers begin to arrive early in June, but the early flowers are frequently defective. They are soon succeeded by good flowers which continue through the season. These are a deeper pink than those of Ophelia, from which Madame Butterfly is a sport.

The decorative value of the flower is very high, the lasting qualities quite fair, the substance of petal good, and it has a delightful fragrance. Mr. Levy calls it a true old Rose and honey perfume.

The blooms last fairly well when cut, but not sufficiently to stand in the Exhibition box, where they are found too thin, and apt to open out flat. It is rather a difficult Rose to "time" well for Exhibition. The colour lasts well in cool weather, but is rapidly deteriorated by hot sunshine. It is not much affected by light rain. The flowers are usually of deeper colour when grown under glass.

This is altogether a delightful Rose which has grown more popular every year. It has, however, two rather serious defects; one is that if frost or cold weather occurs when the buds are forming, the flowers are often malformed, and the other is the serious liability of all its family to attack by stem fungus. In this respect, however, I think it does not suffer so much as Ophelia and other members of that family.

I take the following from Mr. Easlea. "Probably Ladylove will supplant Madame Butterfly, as it is a more distinctive tint with more apricot in the flower. Rapture has more petals, and this too may supplant Mme. Butterfly. Lady Sylvia may be best under glass, but we question if it is an improvement out of doors. J. C. Mensing is another rival which has more petals. Ivy May is on the lines of Mme. Butterfly, extremely pretty, but a very thin flower."

I have not grown any of these but Ivy May, and that is so prone to mildew that it can find no permanent place in our garden.

Mrs. Henry Morse. H.T. S. McGredy & Son, 1919.

Twelve votes. This Rose makes a good compact bush, and branches freely. The plant is rather dwarf, and it is only a strong one that will reach 2 feet.

The foliage is fairly profuse, but in most localities it is sadly liable to mildew, and to some extent to black spot. From this trouble it seems to be free in London and some other localities. I have found potash salts, while not the absolute preventive the Australians seemed to hope, to produce quite good results in the year after their application. The foliage also suffers somewhat from red rust. It requires, therefore, special attention to keep it clear from disease.

The flowers are beautiful in form, full, with a pointed centre, they are silvery Rose on the outside of the petal, and Rose pink on the inside. They commence to flower towards the end of June, and are good again late in the season. Flowers are produced from time to time between these periods, but it is not, in my opinion, a continuous flowerer. In this respect some of my friends do not agree, and consider it continuous. It may, therefore, be a Rose that behaves differently in different localities, or, possibly, we may attach slightly different meanings to the word.

Its decorative value is good, but it must be arranged to show the beauty of its flower, rather than to produce a mass of colour, and it is popular in the Exhibition box, for which the beauty of its form is well suited.

The flowers last fairly well, the guard petals being strong and good, though the centre ones are at times weak. When cut, the life is about average. They are sweetly scented. The colour lasts fairly well in dull, cloudy weather, but is soon affected by sun, and I have at times seen this Rose of an appalling colour, when exhibited, after the sun has been on the flowers. This can, however, and usually is, avoided by cutting when young.

The plant makes a particularly good standard. It will be seen that this Rose has serious defects, and that it must have other qualities of value to enable it to attain the high position that it has achieved. These it no doubt possesses in the beauty and quality of the individual flower, but those who grow it must be prepared to give it some care to obtain it in perfection.

General McArthur. H.T. E. G. Hill Co., 1905.

Eleven votes. The plant makes a strong, well-balanced bush of vigorous habit with strong foliage, slightly glossy, which is not subject to fungoid disease.

During its flowering periods the crimson blooms are produced in quantity, and there may be three and sometimes four flowering periods during the season, but between these periods the bush is usually flowerless, and it is, therefore, not continuous. Some, however, prefer a Rose that will give a good display at intervals to one that is more continuous but gives fewer flowers at any one time.

The decorative value of the flowers is high, provided they are picked young and have been disbudded, and are thus presented before they have been affected by the sun. If cut from good stems they continue to grow in water.

The fragrance is strong, and of the true old Rose character, and this is a great point in favour of this Rose.

The flowers are rather thin, with short centre petals, so that they open to a flat and confused centre, wanting in form. There is also an element of blue in the flower, which is rapidly developed by hot sunshine (Mr. Glassford says they remind him of red cabbage in vinegar, which is scarcely an exaggeration), so that in a warm Summer the August flowering is disappointing. The flowers, however, are not much affected by rain, and it is therefore best in its early and late flowering periods.

There seems little doubt that this Rose is best on rather stiff and heavy soils, preferably those with some iron in them.

The defects of this Rose are obvious. Its tendency to blue, the poor shape of the open flower and the length of the flowerless periods, but, in spite of these, its real merits have caused it to retain its popularity far beyond the life of most Roses.

Its fine and vigorous constitution and strong growth which enables it to put up with some ill treatment, its good habit, its glorious scent, and its profusion when in flower, are qualities which enable it to hold its own, and though some of my friends suggest that it has been superseded, I know of nothing that in its own sphere has yet surpassed it.

General McArthur makes a good standard.

Lady Pirrie. H.T. Hugh Dickson, 1910.

Ten votes. When it does well, this Rose makes a strong, branching bush. For some reason it has not taken kindly to my garden, though I have tried new plants over and over again. I have, therefore, to rely on my friends and its behaviour in other gardens than my own.

The foliage is a good brownish green, generally free from disease.

The flowers, when young, are a pleasing shade of coppery-salmon, which begin about the middle of June, and last into the Autumn—some of my friends say it is continuous, others that it is not continuous, and the latter is my experience.

They have a high decorative value, the buds are long and pointed, and the petals are of good substance, but the flowers are very thin, and soon fade to a yellowish buff. It has little fragrance, what there is being of the Tea type.

When cut young they last well in water.

Mr. Easlea considers that its strong growth and exquisite buds will always make it a Rose to be valued.

Mr. Glassford places it before Betty Uprichard, and thinks it clean, refined and tasteful, that it is very hardy, and the plants last a long time.

I have myself noticed it doing particularly well in Lancashire. . He also suggests that it should not be pruned too hard, as the wood ripens well. Mr. Moore substantially agrees with him.

It makes a good standard.

Los Angeles. H.T. Howard & Smith, 1916.

Ten votes. This Rose makes a good branching bush with tall, rather upright, flower stalks which look as though they would carry the flower well, but become weaker towards the top, so that a full flower will often hang its head.

The foliage is fairly good, and not much troubled by mildew, but somewhat liable to black spot, some of my friends think it much subject to this disease, but with care I think it can be controlled.

This is a really beautiful and decorative flower, particularly when half open, salmon Rose, shaded apricot, it usually comes into flower somewhat after mid-season, and is thenceforward fairly continuously in flower till Autumn.

Its decorative value is high by reason of its lovely shades of colour, but, unlike most of the decorative Roses, the buds are not specially beautiful: the form of the flowers is very fair, but not quite first-class, and they are up to the average in lasting power. Though often shown in the Exhibition box, it is not quite full enough for this purpose, and opening too quickly is apt to let the exhibitor down.

It has a sweet perfume, but not a strong one.

The flowers when cut last only moderately well, but it makes a good vase Rose nevertheless. It stands sunshine better than rain, but is not badly affected by the latter unless it is very long continued.

There has been much discussion as to the connection between Los Angeles and W. F. Dreer. In shape and general character the flowers are very much alike, but W. F. Dreer is paler and yellower. The raisers

gave different parentage to these varieties, but Mr. Easlea says he has had both flowers on the same plant, and Mr. Taylor told me he had a similar experience, which points to W. F. Dreer being a sport of Los Angeles. W. F. Dreer has, however, a rather different habit, being more spreading and less upright in growth, and does not flower so freely.

There is a deeper coloured sport of Los Angeles named Mrs. Hubert Dowsett, and there is also a climbing sport.

The faults of this Rose are a certain tendency to black spot ; the tendency of the full flower to hang its head, though some will carry themselves well ; and the over-rapid opening of the flower ; while some of the plants are not very long lived, though I still have in my garden the batch I got when it first came out. On the other hand, it is a lovely colour and a beautiful flower, and with me has grown strong and vigorously, making a successful garden plant.

Mabel Morse. H.T. S. McGredy & Son, 1922.

Nine votes. This Rose is of spreading growth, and only moderate vigour, making a small branching bush. With me the growth is very poor, and I can never keep plants long, but they are better as maidens. With some of my friends it appears to be more satisfactory, but others complain that it is apt to die back in Winter.

The foliage is a good dark green, very glossy and free from mildew, but subject to black spot.

It begins to flower soon after the middle of June, and continues rather sparsely till Autumn.

The flowers are a fine golden yellow, of fair, sometimes good form, but the centre petals are rather short. It is, however, the best-formed flower of any yellow Rose.

Its decorative value is not so high as that of other yellows, such as Florence Izzard or Golden Emblem. The substance of the petal is only fair, but it is fragrant.

If cut young, the flowers last well in water. They are not much faded by sunshine, but soon open, and will not stand rain. They ball and rot if exposed to it for long.

It is the best-shaped golden yellow Rose, and for this and its fragrance I continue to grow it, but I regard it chiefly as an exhibitor's Rose, and of little use for decoration of the garden. It makes a poor standard, best on rugosa.

Mrs. Henry Bowles. H.T. Chaplin Bros., 1921.

Nine votes. This makes a strong, branching, well-shaped plant, which will run from 2-ft. to 2-ft. 6-in. in height, but at times some of the laterals may be rather short.

The foliage, as a rule, is hard and good, but if not looked after it may suffer slightly from both mildew and black spot, but not badly so.

The flowers are a deep glowing Rose, at their best a beautiful colour, but at times this may be a little hard; they are produced fairly continuously through the season. They are usually of fine form, and carried on erect thorny stems, which seem to remind us somewhat of the Pernet group.

They are of good decorative value, and keep their shape a long time. The petals are of good substance, and the flower has some fragrance.

The colour fades somewhat in sunshine, but on the whole is well retained and, though, like all full Roses, it suffers more or less from wet, there are not many Roses with so many petals that stand a moderate amount of rain so well.

It makes quite a good Rose for the Exhibition box or for specimen vases on the table, and is also very useful for basket work.

It is also an excellent and free flowering garden Rose, and has so many good qualities that it stands high in favour with Rosarians. Certainly, it is one of the good ones, and among the most generally useful of Roses of recent introduction.

Its chief defect is a tendency to a certain harshness of colour, which I have sometimes thought to be softer and more pleasing in the northern districts.

It is an easily managed Rose, and does well in almost any soil or situation and on most stocks, perhaps specially on the rugosa.

It makes a useful standard.

Mrs. Wemyss Quin. Pern. A. Dickson & Sons, 1914.

Nine votes. This Rose has all the good qualities that Mabel Morse lacks, but, except for colour, lacks the good ones possessed by that Rose. It makes a strong, very branching bush, and, if planted where it can be allowed to develop, will make a plant 7 or 8-ft. high and 4 or 5-ft. wide.

The foliage is dark green and glossy, not troubled with mildew, and very little by black spot, and it does not suffer from die back like so many of its class.

The flowers are not so pure a yellow as those of Mabel Morse, and vary somewhat in tint through the season, getting slightly paler in Autumn. The ground colour is a paler yellow, but there is a deeper tint overlying it. Mr. Hart describes it as "canary yellow, flushed madder orange," which expresses this idea. They are produced continuously on unpruned plants. If these are hard pruned for a bed, the flowering is less continuous. They are carried on erect, stiff stems. They are fragrant with a scent which appeals to some more than others, being rather of a fruity character.

The flowers are very thin, rather small, and of poor form, this being the chief defect of this Rose, but they are decorative both in the bud and when further advanced.

They last fairly well when cut. They open rather too quickly, and are apt to fade to a paler tint in hot weather, and are somewhat liable to become spotted by rain.

Mr. Easlea tells me that this Rose came from Harry Kirk, which explains how little like the Pernet group it is in general appearance. It has, however, the numerous and strong thorns which characterize this group.

Its strong, vigorous and shrub-like habit and continuity of flower, when allowed free development, make it one of the best garden plants among the yellows.

Its chief defect is the poor quality in form and size of the individual flowers, but, in spite of this, it makes a really useful plant for garden decoration.

Angele Pernet. Pern. Pernet-Ducher, 1924.

Eight votes. This Rose has grown fairly well with me. Making a slightly branched, rather upright bush. Most of my friends seem satisfied with its vigour, but some find it lacking this quality.

The foliage is dark, glossy and beautiful, free from mildew, and not generally subject to black spot, but, as some of my friends have suffered from this, it is probably not immaculate.

It flowers early, rather before the middle of June, and is tolerably continuous, but with a few blank periods. The flowers are a wonderful colour, a brilliant orange yellow with a curious shade of brown in it, which is strange in so bright a colour. It has a slight fruity perfume.

When I have said this I have done with its good qualities. In form the flowers are deplorable, hopelessly short in the centre petals, and fly open very rapidly. The colour fades and loses much of its effect in hot sun, but the flowers are not much injured by wet.

If cut quite young they have for a short time considerable decorative value, but this entirely depends on the colour of the opening buds.

Many of my friends place it higher than I would myself, and I notice that Mr. Easlea, whose judgment I value, holds it to be one of the best of M. Pernet-Ducher's productions.

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Christine. Pern. S. McGredy & Son, 1918.

Eight votes. This Rose makes a very dwarf, freely branching little bush, with good glossy foliage, free from mildew, and not seriously troubled by black spot.

The flowers are a fine golden yellow, very freely produced, though rather small in size, and the plant is constantly in flower through the season. The flowers are better than those of Mrs. Wemyss Quin both in shape and colour. The buds are quite nicely pointed when just opening into the flower, though the open flower is rather flat, but I shall always remember this Rose as the first indication I saw of the improvement of the poor and flat shape of the majority of the Pernet group, and as raising a hope of the lengthening of the centre petals in that group—a hope, however, that still remains to be realised. If it has any fragrance it is very slight.

The colour is well retained both on the plant and when the flowers are cut, and, being a decidedly thin flower, it is not much affected by rain.

It is a delightfully free little decorative Rose, and, though hardy enough, lacks only the vigorous growth of Mrs. Wemyss Quin to make it the more popular of the two. It makes a good and conspicuous little standard.

Ophelia. H.T. W. Paul & Son, 1912.

Eight votes. This Rose is so exactly like Mme. Butterfly in every way, except colour, that I need not repeat what has been stated under that heading, Mme. Butterfly being a sport from Ophelia.

The colour of Ophelia is generally paler than that of its sport, having much less pink in the petal, and being usually described as salmon flesh. There is a golden base to the petal, which sometimes lights up the flowers. Consequently, the flower is not so striking, as that of Mme. Butterfly, but the more delicate tints of colour in Ophelia are more pleasing to many growers. It is of somewhat deeper colour with more pink in it when grown under glass.

I have found it rather badly subject to stem fungus, which does not seem to attack Mme. Butterfly so readily. There is a climbing sport introduced by A. Dickson & Sons in 1920.

K. of K. H.T. Hugh Dickson, 1917.

Seven votes. This Rose makes a rather branching and free-growing bush; the flowing stems being pushed up nearly erect. It is not quite so strong as Red Letter Day.

The foliage is good, but I find a difference of opinion as to its liability to disease. I think it may sometimes get mildew, black spot and rust, but that it is not so subject to these blemishes that one need trouble much about them. It suffers from stem canker.

The flowers are a grand colour, nearly scarlet, carried in a good open truss, and come into bloom successively. They are produced with fair continuity during the season.

It has very high decorative value; in this respect it has few, if any, equals among the red Roses; and the flowers can be cut young and opened in water, where they last well. The petal is large and of good substance. Some of my friends have found some fragrance, but, though I have often sought it, I have done so in vain, and I should call it scentless, or nearly so.

The Rose is very thin, with but two rows of petals, making the open flower appear almost single, but the buds are long, pointed and well shaped.

It stands sun well for a red Rose, showing very little tendency to turn blue until the flower is quite faded, and it is not materially harmed by rain. Hence it usually does well in Autumn.

The merits of this Rose are its brilliant colour, elegant buds and good vigorous habit as a garden plant, where it looks well even when the flowers, on close inspection, are too much over to cut.

Its almost complete lack of fragrance is the chief objection to it. As a maiden it grows particularly well, but its liability to stem fungus makes many of the plants short-lived, while others, which have escaped this trouble, have been in my garden since its introduction.

Lady Inchiquin. H.T. A. Dickson & Sons, 1921.

Seven votes. This Rose is usually of moderate growth and vigour, with very thorny stems. It is evident that it varies greatly with the soil and position in which it is growing. I find this both from my own experience and my friends' reports, and that where it finds the right conditions it will be found more vigorous than I have described above. The right conditions appear to be a clayey loam, neither too light nor too heavy.

The foliage is only fairly good ; it is rather glossy and lightish green, somewhat liable to mildew, and not immune from black spot.

The flowers are a beautiful colour, glowing cerise with a tinge of orange, but vary a good deal, some almost approaching scarlet, and others a deep salmon pink. It flowers early and throughout the season, but is seldom very free in flower, except in the early batch.

The flowers are of good form and fairly full, but not so much so as to prevent their opening rather too quickly, though they look well on the plant even when full blown. They are most useful for decorative purposes, because of their brilliant and striking colour, and have a distinct, if not strong, perfume.

The colour fades somewhat in the sun, but not to a serious extent, and never goes altogether. It is not badly affected by wet, but the flower stalk is not often strong enough to keep the flower upright.

It is a Rose worth growing for its striking colour, and often large enough for the Exhibition box, particularly if grown as a maiden. Its defects are its moderate growth and lack of freedom in flowering, but in both these respects it may be greatly improved by good and careful cultivation. Mr. Price thinks we should keep our eye on Lady Mary Elizabeth and W. E. Nickerson as possible successors to this Rose.

It does not make a satisfactory standard.

Mrs. A. R. Barracclough. H.T. S. McGredy & Son, 1926.

Seven votes. This Rose makes a fairly vigorous plant, carrying its flowers erect on stiff, upright stalks.

The foliage is good, but not too plentiful, the leaves being separated by considerable intervals on the stalks. It is not free from mildew or black spot, but has not suffered much with me in this respect.

The flowers are a fine rose pink in colour, with a tinge of yellow at the base, rather full, and carried erect. They come about mid-season, and continue at intervals during the season, but the flowering is not continuous. The flowers are usually well formed, but a little too **cupped** and flat for a perfect shape. They have considerable decorative value, and last well both on the plant and in water. The petal is of good substance. It has a good perfume, but not so strong as that of Dame Edith Helen.

The sun does not bleach the colour of the flowers seriously, but does so to some extent, and I think I rather prefer them when the colour is not too deep, as we get it in dark or wet weather.

The good points of this Rose are its glowing colour and erect carriage of the flower. Its defects are that it does not give us quite enough of them, and the colour is not always first-rate. Still, it is a fine Rose, and I notice all my friends have a high opinion of it.

The Rev. F. Page-Roberts. H.T. B. R. Cant & Sons, 1921.

Seven votes. The bushes are of moderate height, spreading, branching, and well balanced.

The foliage is dark, somewhat glossy and hard, and resists disease well.

It begins to flower about mid-season, and continues to produce flowers through the season, but not freely after the first bloom is over.

The flower is well formed, one of the best of its class, but somewhat short in the centre petals; it is fairly full, and lasts well both on the plant and when cut. The petals are of good substance, and it has fragrance, but not the old Rose perfume.

It is at its best in hot weather, and rain is apt to destroy the petals.

It has not great decorative value, but often makes a flower good enough for the Exhibition box or a specimen vase.

This is a good Rose for general garden use, much to be preferred in this respect to Mabel Morse, though its colour is not so bright, because, though a rich yellow, it has a shade of buff or orange in it.

It makes quite a good standard.

Caroline Testout. H.T. Pernet-Ducher, 1890.

Six votes. This old favourite is the oldest Rose on our list. It makes a good, vigorous bush in almost any soil or situation suitable for Roses.

It flowers about mid-season in some profusion, and is fairly continuous through the season.

The flowers are of its well-known shade of bright pink, of fair shape, large and full, but somewhat too rounded to be in the first class for form.

The flowers are effective in the bed, but not specially good for decorative work. The petal is fairly firm, but it has no great amount of fragrance. The flowers last well both on the plant and in water. They are best in cool, dry weather, will stand some sun, but ball with wet.

It is an exceptionally good Rose for a town garden, and its magnificent constitution has allowed it to retain its popularity far beyond the span of most Roses.

It makes a good and vigorous standard, and is useful in Autumn.

Miss C. E. van Rossem. H.T. van Rossem, 1920.

Six votes. This makes a good branching little bush, from which rather tall and upright flowering stems are pushed up.

The foliage is good, but not specially remarkable, and free from disease.

The bright, velvety crimson flowers appear about mid-June, and are freely produced throughout the whole season. At times it is almost too free, as it is difficult to keep them properly disbudded.

The flowers are highly decorative, both when cut and in the garden ; hence it is an excellent bedding Rose. The stems, however, are thin, and sometimes not strong enough to hold the flowers well, notwithstanding that they are rather small and decidedly thin. It has some fragrance, but it is not usually great, and varies much with the weather.

The crimson flowers stand both sun and rain well.

This bright and attractive little Rose is quite hardy, and a most useful garden plant. It makes a fair standard, but, to my taste, the flowers have not quite good enough form for this purpose. Nevertheless, in some positions its great freedom of flowering makes it attractive when in this form.

Madame Abel Chatenay. H.T. Pernet-Ducher, 1895.

Six votes. This Rose has vigorous growth. In the second and Autumn growths it is apt to push out one, or sometimes more, strong growths to one side of the plant, which causes it to appear rather lop-sided unless pruning is carefully attended to ; at the same time, it is a Rose that grows better if not very hard pruned, and requires good cultivation.

The foliage is large, and paler green than some, but inclined to be rather sparse, and is not immune from either mildew or black spot, but both can be kept in check with careful attention.

The flower is one of the bi-colours, salmon pink with paler reflexes deeper in the centre ; sometimes, and specially when grown under glass, there is a suffusion of a deeper colour something between cherry and vermillion, though neither of these colours quite expresses the tint. The flowers are produced from the middle of June onwards, and fairly persistently.

It is of particularly good form for a decorative Rose, but on the small side, and of very high decorative value, and the long, stiff stems preserve the flower for a long time, both when cut and on the plant ; at the same time, I think it more useful for cutting than for producing a mass of colour in the garden, though it is a very fair bedding Rose. It is very sweetly scented.

The sun pales the flowers somewhat, but it is undoubtedly best in sunny weather, and the flowers retain much colour till they fall, while it is not to be despised even in a wet season.

The best soil for this Rose is a clayey loam, not too heavy, but it is not usually at its best on too light a soil. A good dressing of lime from time to time assists it.

Mme. Abel Chatenay is an old favourite which has not yet been displaced. Mrs. Henry Morse, Ivy May and Venus have claimed to take its place, but none of them is so good as a garden Rose.

Its merits (as noted by Mr. Norman Lambert) are :—(1) Its lovely colouring, enhanced by the contrast of shades on the inner and outer side of the petals made more prominent by the elegant reflexing of the petals ; and (2) its good form and lasting qualities.

There is an excellent climbing form (W. Easlea, 1916), the flowers of which seem to me to vary slightly from the dwarf type, and it makes an excellent standard.

Madame Edouard Herriot. Pern. Pernet-Ducher, 1913.

Six votes. The well-known " Daily Mail " Rose. This Rose makes a sturdy medium-sized bush, very branching and short-jointed, with very thorny stems.

The foliage is rather small, close and glossy, not much affected by mildew, which, however, often attacks the stems and thorns, and it is rather liable to black spot.

It flowers early, and though flowering in bursts, is fairly continuous through the season. The colour is a striking shade of terra cotta and orange passing to strawberry Rose. The flowers are produced in a loose bunch at the top of the stem, and open successively, if they are disbudded, better flowers are obtained, but the bed does not appear so continuously in flower. Though the stems are stout, the flower stalks are very weak, and do not support the flower, a great defect in a decorative Rose. The flowers are rather small, but tolerably full, and of good form in the bud, and when just opening. The petals rather thin, and some find a fruity fragrance which to me is imperceptible.

It has high decorative value by reason of its fine colour and fair shape, but the flowers open rapidly, and do not last well when cut. It is rather a difficult Rose to stage unless wiring is resorted to, which I should like to see prohibited.

In sunshine the flower passes somewhat rapidly to a shade of pink, which may become somewhat dull, and it is best in cool weather, but does not stand rain specially well.

It makes an excellent bedding Rose from its close habit and freedom of flower, and makes a good standard, but if this is not pruned rather closely when young, it soon becomes leggy, with bare stems flowering only near the top.

Independence Day. Pern. Bees, Ltd., 1919.

Four votes. This makes a dwarf, much branched and very thorny bush, from which stout flower stems are pushed up. As a rule it is quite vigorous.

The foliage is abundant dark green, free from mildew, but slightly liable to black spot.

The flowers are a fine orange yellow colour, but very thin, being carried like those of Mme. Edouard Herriot in a loose head at the top of a strong stem, but unlike those of that Rose they are carried erect. It flowers early and continuously through the season.

The flowers are of very high decorative value when picked young or allowed to flower in the bed. The substance of the petal is only fairly good, and the flowers are not very long lasting, but are rapidly succeeded by others in the garden. For decoration the flowers should be cut when scarcely half open. It has a slight sweet scent, but not strong enough to be worth notice. Others detect a stronger fruity perfume than I am able to perceive.

Hot sun soon spoils the orange tint, but wet, unless prolonged, does not seriously injure the flower.

Down to last year (1928) I regarded Independence Day as a long way the best bedding Rose of its colour from its excellent habit and sturdy growth, and the rapidity with which the flowers are produced in succession through the season. But the Spring frosts of last season (1928) practically destroyed a bed of this Rose in the lower part of my garden, while the bed in the higher part was so crippled that it was late in the Summer before I had any flowers worth looking at, in any quantity. I fear, therefore, it may not be hardy enough to stand exceptionally severe weather. Before this, however, the Rose had served me well, and I had not been obliged to renew a plant since its introduction. I hope, therefore, that I may still be able to appreciate its many merits as a garden Rose.



MRS. SAMUEL MCGREDY (H.T.).
CERTIFICATE OF MERIT awarded to
Messrs. SAMUEL MCGREDY & SON, Portadown.

MRS. SAM McGREDY.
(H.T.)

Raised by Messrs. SAMUEL McGREDY & SON, Portadown, N. Ireland.

This is a very pretty and attractive Rose. The blooms are a good shape, and carried erect. The colour is a combination of shades of scarlet, copper, orange and red that produce a dazzling effect. Sweetly scented. The foliage is a dark bronzy red. The habit of the plant is vigorous and upright. It will be an ideal bedding Rose, and also useful for cutting.

THE POETRY OF THE ROSE.

By FORREST REID.

Poetry is an Eden wherein blooms every flower. But poets have their favourites. Those daisies were planted by Chaucer; those daffodils by Herrick and Wordsworth; the lilies afloat upon that dark, stagnant pond belong to Edgar Poe: only the Rose is spoiled child of all. And note that it is the carefully-tended garden Rose. The wild Rose, the Dog Rose, the Hedge Rose—lovelier names, and possibly lovelier in itself—is rare. Is it, then, because of its value as a symbol that the Rose is so popular? Often we find no symbolism attached to it. Shakespeare uses it as a term of endearment, and Richard II. is “that sweet lovely Rose” because Shakespeare himself loves his gentle dreamer, whose “glory like a shooting star” has fallen to earth. More: by some magic in the words, as the image of Richard is created by the Rose, so we see this particular Rose in our vision of the king, know that its perfume is delicate, its petals few and not yet quite unfolded, a Rose in early morning, shadowed by green leaves.

Thus, in one of his finest poems, the Wild Rose is chosen deliberately, I think, by William Morris, for its suggestion of freshness and simplicity. He is writing of Sir Galahad, who has come to the chapel in Lyonesse, and finds there a young knight, wounded, half-unconscious, dying:

“ So I went, a little space
From out the chapel, bathed my face
In the stream that runs apace
By the churchyard wall.

“ There I pluck’d a faint wild Rose,
Hard by where the linden grows,
Sighing over silver rows
Of the lilies tall.

" I laid the flower across his mouth ;
The sparkling drops seem'd good for drouth :
He smiled, turn'd round towards the south,

* * * * *

Death him soon will bless."

There is no symbolism here, nothing but the natural beauty of the flower; and whatever stirrings of the imagination it may awaken, I believe, too, it was simply a Rose-tree growing in a garden that Blake had before him when he wrote :

" O Rose, thou art sick !
The invisible worm,
That flies in the night,
In the howling storm,

" Has found out thy bed
Of crimson joy;
And his dark secret love
Does thy life destroy."

But used even as a definite symbol, the Rose has not always the same significance. Most commonly it is the flower of the Venusberg, the flower of Lilith :

" The Rose and poppy are her flowers; for where
Is he not found, O Lilith, whom shed scent
And soft-shed kisses and soft sleep shall snare? "

It is, then, the emblem of the body's passion, of voluptuous pleasure, and certainly it has this meaning for Herrick, to whom it suggests the warmth and rounded curves of Julia's bosom. We can picture Herrick's Rose as clearly as the Rose of Shakespeare or Morris. Its hue is rich and dark; it is full-blown; its scent is heavy; its petals are a little fleshly. It suggests nothing *beyond* Julia, and nothing of Julia beyond her bodily charms. In the *Noble Numbers* it can find no place. But Herrick's Roses are still Roses growing upon trees, though they may incline to the cabbage variety and belong to the kitchen garden; the Rose in another kind of poetry seems to have dropped from a wreath worn at some Roman or Alexandrian feast :

" I have forgot much, Cynara ! gone with the wind,
Flung Roses, Roses riotously with the throng. . . . "

The Rose here brings with it no thought of gardens; it is an embroidered Rose; the flower in nature is lost sight of, or rather was never seen; all that is expressed is the disillusionment and sense of waste following on a fevered erotic excitement. The red Rose is the symbol of this profane love, and the white Rose of love unawakened. Yet, qualified by Swinburne in one amazingly expressive line,

" White Rose of weary leaf,"

the white Rose loses its innocence, becomes slightly tarnished, the emblem of a dubious virginity.

And then, by Yeats, who has used it more than any other modern poet, who has woven it into the background of one entire section of his work, the symbolism of the Rose is completely altered, or perhaps I should say is carried infinitely farther, so that it really begins where the other leaves off. In the poems of Yeats the Rose no longer means mere bodily pleasure, but is the emblem of supreme beauty and of spiritual love :

" All things uncomely and broken, all things worn out and old,
The cry of a child by the roadway, the creak of a lumbering cart,
The heavy steps of the ploughman, splashing the wintry mould,
Are wronging your image that blossoms a Rose in the deeps of my heart."

It is the symbol of an " immortal passion " breathing " in mortal clay "; it blossoms upon the Tree of Life; it is the Rose upon the Rood of Time :

" Red Rose, proud Rose, sad Rose of all my days !
Come near me, while I sing the ancient ways."

It is the Rose of Battle—" beauty grown sad with its eternity "—it is the Rose of the Knights of St. John, *Rosa Alchemica* :

" Far off, most secret, and inviolate Rose,
Enfold me in my hour of hours; where those
Who sought thee at the Holy Sepulchre,
Or in the wine-vat, dwell beyond the stir
And tumult of defeated dreams. . . . "

The poetry of the Rose belongs to the splendour of Yeats's middle period; it haunts his imagination, and is expressed again and again not only in poems but also in the prose tales he wrote at this time. Some of it has disappeared in later revision, but much still remains, and how far we have journeyed from the Rose of Rossetti, Dowson and Swinburne may be gathered from this passage :

" The dance wound in and out, tracing upon the floor the shapes of petals that copied the petals in the Rose overhead, and to the sound of hidden instruments which were, perhaps, of an antique pattern, for I have never heard the like; and every moment the dance was more passionate, until all the winds of the world seemed to have awakened under our feet. After a little I had grown weary, and stood under a pillar watching the coming and going of those flame-like figures, until gradually I sank into a half-dream, from which I was awakened by seeing the petals of the great Rose, which had no longer the look of mosaic, falling slowly through the incense-heavy air, and, as they fell, shaping into the likeness of living beings of an extraordinary beauty. Still faint and cloud-like they began to dance, and as they danced took a more and more definite shape, so that I was able to distinguish beautiful Grecian faces and august Egyptian faces, and now and again to name a divinity by the staff in his hand or by a bird fluttering over his head; and soon every mortal foot danced by the white foot of an immortal, and in the troubled eyes that looked into untroubled shadowy eyes, I saw the brightness of uttermost desire as though they had found at length, after unreckonable wandering, the lost love of their youth."

I have but touched the fringe of a subject; mediæval literature is filled with the Rose; but knowing the limits of my space I have written without reference to books and only of what came unsought. Yet it is significant that this lazy method would have been impossible had I chosen another flower; then, jogs to memory would have been indispensable. Those dahlias, for instance: What poet has praised them? And that nasturtium?—I can recall only a single line in which it appears, a line in "The Land of Heart's Desire," a line from which, now I come to think of it, the poor nasturtium has since been removed in favour of the "blessed quicken wood."

NOTES ON ROSE PRUNING.

By E. J. HOLLAND, Past-President N.R.S.

Next to the choice of a suitable situation for the Rose beds, thorough preparation of the soil, and careful planting, pruning must be regarded as one of the most important items in the Rose grower's routine. And since this operation appears to present difficulties—certainly is often carried out with very little discrimination and success—I hope these notes, a revised edition of a paper written many years ago, may afford some guidance to the uninitiated.

It is necessary, in the first place, that the reasons for pruning, and the objects aimed at, should be clearly understood. Shortly they are :—

To ensure blooms of good quality; to preserve the plant in health and vigour; and to induce a more shapely plant.

Take the case of a dwarf plant of some vigorous-growing Hybrid Tea. If the plant were allowed to go unpruned, to run wild, the tendency would be for the production of numbers of small shoots at the tops of the previous shoots. These would develop early, almost certainly to be damaged by frost. The stems would become more or less bare, and the result would be a leggy plant, yielding a small and practically worthless bloom on short stalks, with poor foliage.

The process of pruning or shortening the shoots so as to leave only a limited number of eyes at the base of the shoots is designed to ensure healthy new growths strong enough to bear fine blooms. The



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degree of shortening will depend upon considerations to which reference will be made later.

A second and most valuable result of proper pruning is the encouragement of new growths from the base of the plant, which ripen in the Summer and Autumn, and are available for pruning the following Spring. After pruning it is from these well-ripened new growths that shoots will be sent out, on which the finest blooms will be borne. Soon after the flowering season, if the plants are healthy, a similar production of fresh new growths will be observed on most varieties year after year. When they cease to come, it may be assumed that either the plant or the soil is exhausted. With reasonable care in pruning year by year, cutting to outward, pointing eyes, removing superfluous or misplaced shoots, also soft and unripened wood, the third object of keeping the plant in shape can be attained. Even when a suitable variety is allowed to develop into a large bush judicious pruning and thinning are still desirable.

Pruning, therefore, is a *necessary* operation. We often hear people say: I want a lot of flowers; I do not grow for exhibition, so that I do not prune very much. That is a mistaken idea. Careful pruning is still required; it may not be so severe, but it must be skilfully done. A mere trimming up of the plant is not pruning.

Moreover, the exhibitor limits the number of blooms on each plant not so much by pruning as by a rigorous thinning out in May of the fresh growths produced after pruning. The Rose grower, whose aim is garden decoration, or the production of a larger number of blooms, need not reduce these to the same extent, although some thinning is necessary, so that all shoots left have space for proper development.

Pruning can be regarded as comprising two operations:—(1) Taking out from the old plant worn out and useless wood. (2) Shortening the well-ripened and vigorous shoots to a greater or less extent, according to the variety. The first may with advantage be carried out in late Autumn; the second must be done in the Spring, during the month of March or early in April.

Materials and Implements Required.

In the hands of an expert operator nothing more is really necessary than a sharp knife and a piece of oil stone, or other material for keeping a keen edge on the blade. But many Amateurs find secateurs more convenient.

Discussions have taken place as to the relative merits of knife and secateurs, and certain results have been held to prove one better than the other. Personally, I prefer the knife. I find it much handier, the cut is smooth, clean and sloping, and I can work more quickly. There is, perhaps, some risk of cutting accidentally into a shoot one does not wish to touch, or even of pulling up the plant, if the knife is not sufficiently sharp, or the plant not set firmly enough in the ground. This latter trouble is most likely in the case of plants put in the previous Autumn. With secateurs this risk is eliminated; but unless they are very sharp the cut is often rough, the shoot is to some extent crushed, and the appearance of the pruned plants is not so pleasing as when a knife has been used. However, if the shoots are properly cut back, whether with knife or secateurs, there will be no material difference in the results later.

In practice it is convenient to have both at the time of pruning. The knife can be used for the actual pruning, and secateurs are handy for the purpose of taking out useless wood, often from difficult places, where the knife could not be employed. It is also convenient to have two knives of different sizes. I have frequently used a large-sized budding knife for a good deal of my pruning, reserving the ordinary curved blade pruning knife for the stronger shoots on vigorous varieties.

The General Rule in Pruning.

Coming to the actual operation itself, there is little or no difficulty when once it is understood that in the care of the strongest growing varieties pruning is least required, and at the other end of the scale in the case of the weakest growing varieties it is most necessary. At first sight this may seem paradoxical, but the more the matter is considered the more its reasonableness will become apparent.

So the general rule—and this almost without exception—is that varieties of weak growth must be pruned hard, medium growers less severely, and strong growers still less. With this rule in mind, a glance at the plant will give an indication of the treatment required.

The rule may be carried still further, specially strong, if hard and well-ripened, shoots of any variety should always be left longer, that is, cut back less severely, than smaller shoots, and the number of eyes left, whether three, four, five or six, will depend upon these simple considerations. What I wish to emphasise is that there is no mystery or real difficulty about the matter.

Attention should be given to one or two details. Cut close to an outward pointing eye, and with an upward and outward sloping cut, but not too close and not too sloping.

Always cut back to dormant eyes.

A few notes on the treatment of three forms of Roses usually employed in gardens may be useful.

Dwarf or Bush Roses.

Here the degree of pruning will almost entirely depend on the vigour of the variety; but general rules, such as those which have been given, may have to be modified to suit circumstances. After a severe Winter it will often be found that the pith in the centre of a shoot is discoloured, showing that injury has been done by frost, and when this is the case, one is obliged to cut away until white pith appears, that is, to a point below the damage. And in all cases, soft, pithy, unripened shoots should be entirely removed at the base, as they are quite worthless on the plant, or for the production of strong new growths and good blooms.

The first Spring after planting, all dwarf Roses are best cut down to within three or four inches of the ground. This secures a good foundation, and difficulties which might otherwise arise in subsequent years are obviated.

Standards and Half-Standards.

The varieties budded on these are generally the same as for dwarf plants, and treatment will vary accordingly. If one could regulate matters, a Rose law forbidding the use of any but really suitable strong growing sorts for budding as Standards should be strictly enforced, to the great advantage of the Rose grower and the saving of much disappointment.

As it is, frequent failure must be attributed to the use of wrong varieties, resulting in miserable little heads, most difficult to prune, and a complete travesty of what well-grown specimens should be. Naturally the pruning often resolves itself into snipping around with secateurs, leaving a diminutive mop-head on the top of the briar stock. There can be no real satisfaction in such Rose growing.

If, however, strong-growing varieties adapted for Standards are employed the pruning is simple. Cut back to within six inches or less of the point where the previous year's shoot was pruned, having regard to the shape of the head. It should be noted that new shoots from the point where the Rose was budded are not, as a rule, so freely produced in the case of Standard Roses, and one is more dependent on the older wood.

Some of the weaker growing Tea Roses on Standards may profitably be cut hard back almost to the union of Rose and stock; but few, except exhibitors, will care to grow any but the vigorous, free-flowering varieties in the form of Standards.

So-called Weeping Standards, *i.e.*, Standard Briars budded with Roses of the *wichuraiana* type, simply require the removal of old wood and superfluous shoots and a slight shortening of the long growths, as indicated for climbing Roses. It should always be remembered that the Roses are produced on the lateral shoots on these long growths.

Climbers and Ramblers.

Climbing and Rambling Roses require little or no pruning in the strict sense of the term, but a considerable amount of attention must be

given to the removal of old and worn-out wood, and to the preservation of new shoots. This is best done in the Autumn or Winter months, at any time when the weather is open, when the whole of the plant can be unfastened from pillar, arch or pergola, laid on the ground, old and superfluous shoots cut out, and the well-ripened new growths carefully arranged and tied up again. Such a procedure is not always possible, but if the matter is dealt with from year to year there is little or no difficulty. For best permanent results climbing Roses should be cut down to the ground the first Spring after planting, or if one or two shoots are left the others should be cut down hard, nearly to the base of the plant.

Time of Pruning.

Commence early in March with the Hybrid Perpetuals, especially with varieties which are slow in breaking into growth. Frau Karl Druschki is an example.

It is sometimes argued that one should not prune early for fear of frost. All my experience is in favour of reasonably early pruning, before the plants start into anything like active growth. It is clear that unless very mild weather is experienced during March, and this is exceptional, progress will be slight, but the advantage gained in extra time for the eyes to swell up and become plump before breaking is considerable. Damage by frost arises not to the old wood but to the new shoots, usually in May, and whether we prune early in March or late, by that time growth will have been made and the damage will be done. It cannot be avoided by late pruning.

Some of the Hybrid Teas are closely allied to Hybrid Perpetuals, while others are more related to the Teas; and there are intermediates. The Hybrid Teas may be left till the latter half of March.

It is always more satisfactory if, after pruning, the weather remains cool and the start into growth is gradual. If immediately the Roses are pruned mild weather ensues, there is a tendency for the shoots to break quickly from the upper eyes, these apparently taking most of the sap and starving the others.

Tea Roses should be pruned late in March or early in April.

Conclusion.

Possibly a word of warning is necessary. Careless use of the knife is a thing to be scrupulously avoided. I have seen fine plants of very strong growing sorts cut down just like any Hybrid Perpetual or Hybrid Tea of medium growth, when the natural result follows, viz., luxuriant growth and extremely few flowers. Such varieties must not be pruned hard; quite the contrary, the shoots must be left long. They are well adapted for the pegging down system. And different classes of Roses need different treatment if best results are to be secured. These classes are dealt with in the N.R.S. book on pruning under a series of "Instructions." Indifferent handling of the pruning knife, treating all alike, spells certain failure with some of them, and those who would avoid mistakes and disappointments should certainly take the precaution of consulting this valuable guide.

No amount of verbal description or direction can indicate so clearly as pictorial illustration the practical application of these notes. Accordingly, photographs have been taken showing the appearance of the plant before and after pruning, also correct and incorrect methods of using the knife, and the illustrations in the Society's Instruction for Pruning will be found most helpful; still more instructive, after one has grasped the main principles, is to see a few plants actually pruned by some skilful Rose lover.



A fine specimen Standard Rose.
Mrs. WEMYSS QUIN.



Dr. CAMPBELL HALL.

LORD ROSSMORE.
(H.T.)

Raised by Dr. CAMPBELL HALL.

A very large, full, globular, slightly scented bloom. The colour is a clear cream, shaded on the tips of the petals, which are a little on the soft side. The habit is vigorous and upright, the blooms being produced singly on tall, stiff stems. The foliage is a dark olive green, somewhat reminiscent of Mrs. Charles Lamplough. I have flowered this variety on shot-out buds, and it should be a good variety for those who have the big bloom for an ideal.

A FINE SPECIMEN STANDARD ROSE.

Mrs. WEMYSS QUIN.

This somewhat unique Standard Rose Tree is growing in the garden of Mr. P. Ferguson, of Port Glasgow, and at the time the photograph was taken it carried no less than 105 blooms. It is growing in a loamy soil on clay, and was planted six years ago, and has been subject to no extraordinary treatment. Farmyard manure is applied in the Spring with a little bone meal, and an occasional dressing given of Humber Fish Manure. The bed is limed every other year. The pruning has been moderate, and on account of the situation of the garden—the sun does not reach it during six weeks in the year—was carried out at the end of April. Little or no thinning of the shoots was done. Mrs. Wemyss Quin is undoubtedly one of the most reliable yellow bedding Roses we have, and thrives best on the Briar Stock.

ROSES ON THE ROOF.

By L.H.S.

When I volunteered to contribute to the *Annual* an article of the above title, I naturally had visions of novel and interesting effects high up in the air, produced by some weary town dweller denied the pleasure of a garden, and struggling against the arisings of a myriad of chimney pots.

I had heard there were some wonderful roof gardens in London, and I soon took an opportunity of visiting one made 17 or 18 years ago on top of a great store in Oxford Street. This garden for a few years past has also had the advantage of an artesian well, which ministers to the wants of the establishment. Great trouble had been taken, and large sums of money spent, but for very mediocre results; and I am sure that Roses in sunken pots, if planted in masses, and close enough together, would give an increased gaiety to surroundings where many of the bushes and plants seem to be suffering from a considerable dilapidation, but where great financial expenditure does not seem to break any hearts.

There were many great heavy rocks, with stocks growing in the hollows, and in some places the soil is three and four feet deep; all this great weight having been lifted up from the street by means of a crane on the roof.

There was a biggish bed of marguerites and geraniums, many holly bushes, some variegated laurels, chrysanthemums and marigolds—and hundreds of sparrows !

The Great Brains which operate downstairs had obviously not functioned on the roof, but there was a look-out tower for the public, and a transmitting station belonging to the B.B.C.

What a vast expense !

Alas, the Roses ! There were only two struggling wichuraiana ramblers surviving out of the host originally planted.

There were some suspicious looking reinforced concrete pillars projecting through the roof level. These I was told were ready for extensions. And the possibility of making a new roof, one or even two stories up has, I expect, prevented the Great Brains from concentrating on a garden which at any moment may be capsized and ordered to remove itself to a new level.

The London Gardens Guild have very politely supplied me with a list of roof gardens, constructed on a much smaller scale. Perhaps I may be privileged to pay some of these a visit when convenient.

Now, standing at the N.E. corner of London Bridge, is an enormous new style structure which, since the War has replaced the old Pearl Assurance Co.'s less pretentious building. I had been told that here I would find a wonderful place, with putting greens and fruit trees, and Roses and gay annuals.

I was very anxious to see how it was done. It is not everyone who has a flat roof, and those who have do not always possess the initiative, or the necessary length of purse, to face the difficulties which are bound to arise in the creation of such an aerial oasis. There is no doubt that a wonderful piece of work has been done at Adelaide House, which owing to the considerable courtesy of the owners anyone can see who has the leisure to call at a suitable time. But at certain times of the day, and in amiable weather the roof garden there is used for business meetings and discussions, and care has to be taken not to disturb these.

Here, getting on for 180 feet above the Thames, at the top of a multi-floor structure, erected to the designs of Sir John Burnet &

Partners, Architects, the principal owner, at immense expense and labour, has created a wonderful roof garden, although in the matter of the flower in which we are particularly interested, both the numbers and the results are on the disappointing side.

This principal owner does not seem to love the middle levels of life. At Adelaide House he works as high up in the air as he can get. In East Kent, where he is a colliery proprietor, he works a couple of thousand feet or more under the ground !

An entire absence of chimney pots is an advantage to this garden. The business potentate, much interested in the use of coal, here directs that oil is to be used as a heat agent, and like the Anglo-Persian Oil Co.'s immense building—Britannic House in Finsbury Circus—there is only one small and inconspicuous funnel.

There seems to be about 18 inches of soil over most of the area of this big roof. It is difficult to assess the soil tonnage, but at a guess it looks like getting on for eight or nine hundred tons, and I gather that this soil was all brought up the Thames by barge and then hoisted up to the roof by means of a small davit and tackles.

The soil is not levelled all over, but is laid out with an undulating surface, for the purpose of making things less easy for the golfer who prefers to practise his putts practically on a level with the top of Sir Christopher Wren's 200 feet Monument, and with a wonderful view all over London.

The soil surface has been laid with very beautiful grass turves, which came all the way from Cumberland. The first laying failed, but the second attempt, only about eighteen months ago, is much more successful, and the grass might have been there for ages, so well established does it seem. These turves were cut to a uniform size of 2 feet by 1 foot, and as there are several thousands of them, it took the perspiring porters and staff three or four days—with night work as well—to transport them from street level to roof.

When all was set the place was planted, but largely with fruit trees.

Among the apples I noticed specimens of Beauty of Bath, Lady Sudeley, Fearn's Pippin, Lord Burghley, and King of the Pippins. Perhaps they are not yet long enough established, but these trees did not give one the impression of being quite at home in their novel surroundings. They were very short of foliage, and some of the trees only had two or three apples on them.

There was an Elton Bigarreau and a Napoleon Bigarreau Cherry; these two varieties being obviously chosen to ensure reciprocal fertilisation, as so far no self fertile sweet cherries have been found. There was also a Blue Rock Plum, and a few tomatoes. As I made my visit in mid-September, and some of the varieties mentioned are very early fruiting, it is possible that the fruit deficiency is accounted for by natural causes; but the foliage shortage was most pronounced, and the need for some scientifically compiled fertilisers seems to be indicated.

As to England's flower, there were four or five bush Roses and half-a-dozen pillars over by the western parapet, and elsewhere some nine or ten bushes, and about 36 Ramblers of the very ordinary kinds.

The Ramblers did not look altogether in their best mood. They had all been trained vertically; there was dead wood about, and the poles up which they struggled had not been stripped of their bark, thus giving refuge to an insect host. The Roses, I was told, had not done very well on the whole. There were no flowers in evidence at the time of my visit, although one would expect them at that time of year. But at any rate the growth was healthier looking, and there was much more foliage than in the case of the fruit trees.

I think Roses in pots should do well in such a position, providing the varieties were suitably chosen; the pots could be easily comouflaged, and the Ramblers should do better if trained horizontally. I feel sure a great success could be made of the Roses there if the matter was put in the hands of such a master of his art as Mr. Walter Easlea, of Leigh-on-Sea, and where such vast sums of money have been spent the extra cost involved in using pot Roses, closely planted, would not matter much.

Tanks have been erected on the roof, everything is perpetually watered, and a valiant effort has been made to ensure proper drainage from the soil.

There are some Indian daisies, asparagus fern, a border of phlox, a bed of antirrhinums and marguerites and, of course, some ivy. These all seem to do well and prosper, and add considerable charm to their surroundings.

There it is, right up above London, for all to see who are fortunate enough to obtain permission.

Not, of course, without defects arising out of the disabilities of the site, but an ambitious and, on the whole, a successful undertaking.

They are making a rockery. There is crazy paving for those who like it, a wheelbarrow, a sundial, a mowing machine, and a gardener—quite in the best style—and all conspiring together, up in the sky above the Pool of London, to do their best for the zealous merchant adventurer who created the garden, and who takes a perpetually enthusiastic interest in its welfare.

ADELE CROFTON.
(H.T.)

Raised by ALEX. DICKSON & SONS, LTD., Newtownards, Co. Down.

A very sweetly perfumed Rose of a golden yellow, shaded peach, colour. The buds are well formed, with high, pointed centre, but the blooms open rather flat. The habit of growth is vigorous and free. Foliage, dark olive green, and fairly free of mildew. Should be a useful bedding variety.



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ROSES BLOOMING ON LONG STEMS.

By B. W. PRICE, Tuffley, Gloucester.

In spite of the very large number of varieties that fill our Rose catalogues at the present time it is really surprising how comparatively few of them lend themselves to cutting for table decoration.

I was very struck with this fact when, as a member of the Rose Conference last Summer, I visited the Rose Nurseries under glass in the Lea Valley. The ordinary Amateur might have expected to see a fairly wide selection of varieties growing in the huge glasshouses. In this he would have been woefully surprised. As a matter of fact they numbered as nearly as possible a round dozen only. Now the growers were naturally out to supply the British Public with what they wanted in the way of the most suitable and attractive Roses to adorn their dwellings. Why, then, should the choice be so limited? Of course it must be granted that not all Roses lend themselves to forcing under glass. That of necessity is their first consideration, but there are other points that weigh with them to a material degree. What, then, are the requirements of a good "cutting" Rose? First and foremost I think comes a good long stem. However beautiful and desirable a Rose may be, if it blooms on short stems it cannot be displayed to advantage in vases or Rose-bowls. Another less important consideration is the comparative absence of thorns. True, these may be removed, but the process is a rather painful one, and one we ought not to call upon the lady of the house (who usually looks after the decoration of our tables and sideboards) to perform. For this reason I do not look with favour on such otherwise desirable sorts as Lady Inchiquin and Clarice Goodacre. Then form and lasting properties are other important

desiderata, and the absence of foliage, too, far up the stem is another point in their favour. Last, but not least, their foliage should be free from the diseases that Roses are, alas, too often prone to.

To those who are contemplating devoting a greenhouse to the cultivation of Roses for cutting for room decorating, and are in doubt as to the best varieties to employ, bearing in mind the qualifications I have laid down, I don't think I can do better than discuss the sorts I found thriving so luxuriantly in the "Homes of the Roses under glass."

For yellows the honours seem to be divided between Golden Ophelia and its sport Roselandia. Both have fine long stems, although we can scarcely hope to emulate the great length attained to under the skilful culture given in those noble glass halls. Our old friend Mme. Abel Chatenay was, of course, there in all her glory, but her nose has been largely put out of joint by her younger and beautiful rival, Mme. Butterfly. The latter is, perhaps, the nearest approach to perfection our raisers have reached in Roses best suited for indoor and outdoor cultivation for cutting. It has also that elusive virtue of a sweet perfume.

I noted also that *her* pre-eminence was threatened by a more lively coloured sport, Lady Sylvia. The ancestor of this bevy of beauties was still being grown in lovely Ophelia. Sometimes my heart still goes back to my first love, and in the open ground I have been caught wondering if Ophelia is not in all her delicate colourings the most beautiful.

Under glass there is no disputing the suitability of Hoosier Beauty, but in some soils and districts I have heard complaints as to its vigour and spindly, straggling habit. Speaking of Hoosier Beauty as I find it in my Rose plot I have only one complaint to make. It has an objectionable habit in late Summer of sending up long basal shoots carrying quite a large loose cluster of buds which, of course, open at intervals. We are thus faced with the dilemma that if we want to cut the shoot to obtain one developed bloom, we have to deny ourselves the fruition of many buds. This fault obtains in many otherwise excellent decorative Roses and makes them of little use for cutting in the late Summer and Autumn.

Another American Rose grown fairly largely is the rose-pink Premier. This Rose is not much grown in this country, and is listed in few British catalogues. It is full and the blooms come on long, almost thornless stems, and are delightfully fragrant. There is no doubt it is seen at its best under glass. The white varieties seemed to be confined to two, viz., Molly Sharman-Crawford and Mrs. Herbert Stevens. Both are well known and excellent in their way. I have hopes, however, that White Ensign may prove an improvement on the latter in many ways. In my own garden I have found Westfield Star fine for vase work. It is a lemon yellow sport of Ophelia with all its parents' good qualities, and deserves to be more widely grown. Others growing in the open I have found most useful for cutting are :—

Clovelly.—A really fine pink, and one of the best in its colour if only the foliage would keep free of mildew.

Angele Pernet.—A wonderfully striking blend of colours, but perhaps the stems are a little bit on the thorny side. The foliage is grand.

Shot Silk.—Perhaps one of the best introductions of recent years, and well named, as it is truly descriptive of its colourings. This also has beautiful disease free foliage.

Betty Uprichard has already become a prime favourite, and its long, straight stems makes it indispensable for our purpose.

Aspirant Marcel Rouyer.—I consider this Rose an improvement on Mélanie Soupert, which it much resembles in colour, but it is fuller.

Covent Garden.—This rich crimson Rose is very useful in the Autumn, when it is at its best. If it only had perfume !

Emma Wright.—In spite of its shortness of petals and lack of fulness, until we get a better orange we must still grow her for cutting.

Hadley.—If it were not for its tendency to blue and its foliage to mildew, this is the ideal dark crimson Rose, with delicious old Rose perfume.

Los Angeles.—Now too well known to need description.

Miss C. E. Van Rossem.—With good cultivation I have found this velvety dark red Rose ideal for cutting.

Mrs. Henry Morse.—Another splendid variety if only you can keep it free of mildew.

Norman Lambert.—Perhaps the best of the numerous modern art shades for cutting, as the blooms are carried on long, stiff stems.

Una Wallace.—A good cherry Rose without shading. With me it is a good grower, and the blooms always come a perfect shape.

Ville de Paris.—This modern Rose of Continental origin comes on a long stem of purple-brown colour, and its fine foliage is free of disease. Its yellow colour does not fade, and it opens in all weathers.

Of the singles or semi-doubles I would select **Isobel**, **Irish Fireflake**, **Lulu**, **K. of K.**, **Red Letter Day**, and **Vesuvius**.



ROSES IN WATER-LOGGED GARDENS.

By HERBERT OPPENHEIMER, Deputy President.

Novices in the art of Rose culture naturally turn to the writings of experts for information as to the best methods to overcome their difficulties. On many subjects we shall find ourselves perplexed by differences of opinion, but on one point all authorities are agreed, viz., that adequate drainage, either natural or artificial, is indispensable to the successful cultivation of the Rose. Unfortunately the experts do not indicate what shall happen to the ill-fated enthusiast who finds it impossible to secure this essential condition, and whose efforts are spent on a water-logged garden. The object of this paper is to show that he need not be condemned to a Roseless existence, but that with a little extra trouble, and subject to certain limitations, he can grow Roses which will not compare unfavourably with those of the gardener who enjoys more congenial conditions.

The reader can certainly not be confronted with greater difficulties than the writer, whose former garden was situated in the Thames Valley about three feet above the normal water level, and was flooded to a depth varying from an inch to three feet during an average of eight weeks every year, between the beginning of December and the end of March. For several weeks after the flood had subsided the ground resembled a bog. The soil below the top eight inches was a steely clay, which adhered to the tools like glue when wet, and assumed the consistency of a brick when dry. The level of the water in the soil always corresponded with that of the river, so that any drainage was out of question when the river was in flood, or even substantially above the normal level. Having regard to the distribution of rainfall during the seasons, drainage was useful mainly during the winter months when the roots were dormant and did not require much moisture, whereas the

rainfall during that period was mostly excessive. In the Spring and Summer months, when the roots were active and required plenty of water, the rainfall was usually insufficient or barely sufficient. So far from drainage being an advantage during those months, our object is rather to conserve moisture in the soil. It will, therefore, be obvious that in this and similarly afflicted gardens any attempt at artificial drainage would be a wasted effort during the winter, and positively harmful during the Summer. Yet the Rose will flourish even under such conditions, and after many years' experience in endeavouring to overcome the natural difficulties of a water-logged garden, the writer has come to the conclusion that success depends mainly on the following four factors, viz. :—

- (1) Suitable preparation of soil.
- (2) The planting of well-rooted specimens.
- (3) Persistent war against fungoid and insect enemies.
- (4) Selection of suitable varieties.

It is hoped that by giving some hints under these four headings readers who are unable to provide an adequate drainage system for their Rose beds may be spared some of the many disappointments and failures which have fallen to my lot.

PREPARATION OF SOIL.

The soil in a water-logged garden usually errs on the side of heaviness. The subsidence of excess moisture after the long winter months, and the subsequent drought, which is only too frequent, will cause a heavy soil, especially an obstinate clay, to settle round the surviving fibrous rootlets with the consistency of Portland cement, and whilst firm planting is a desideratum, there are limitations even to the powers of penetration of Rose roots, and a tolerably congenial rooting medium is essential. In order to provide this the ground should be bastard trenched, and in addition to a liberal dose of stable manure (a barrow load to every four square yards) and $\frac{1}{2}$ -inch bones (1 lb. to the square yard), and such quantities of rotted turves as are available; a plentiful supply of coarse sand, or road grit, should be worked into both spits, not in layers, but thoroughly incorporated with the soil. Do not stint the quantity; it is wonderful how much lightening material the

beds will swallow up before an appreciable effect is produced. A barrow load to every square yard is by no means excessive. Bear in mind that the road grit must not come from a tarred or chemically treated road, or the remedy may prove worse than the disease.

Where immediate planting is not necessary the following method of preparing an obstinate clay soil has been found by the writer to be superior to any other. When bastard trenching incorporate with both spits in addition to the lightening materials about 4 lbs. freshly slacked lime to every yard. Do not work in the stable manure at the same time, or the lime will burn all the good out of it. After an interval of not less than four, preferably not less than six, months bastard trench again and dig in the stable manure, turves and quarter-inch bones. The difference in the soil during the second trenching will be a revelation. Soil that formerly had to be lifted in solid unbreakable clumps will be beautifully friable, and crumble down under a gentle pat with the back of the spade. In fact you will find your clay converted into a very near approach to the ideal loam. This method may seem troublesome, but it is certainly less exhausting and expensive than the removal of a large quantity of soil and the substitution of imported loam, while its permanent results amply repay the labour involved. Needless to say, none of the above operations should be carried out whilst the ground is in a water-logged condition.

One other precaution, which may be regarded in the nature of a luxury under ordinary conditions, should never be omitted when planting Roses in a water-logged garden. Prepare a heap consisting of equal quantities of sand, leaf mould and sifted soil, well mix, and place a few inches of this material beneath and above the roots when planting and before filling in the ordinary soil. This will not only give the roots a good start, but will also ensure that when the floods or heavy rains cease, the excess moisture will leave the immediate vicinity of the delicate fibrous rootlets as soon as possible.

In the comparatively rare cases where the soil of a water-logged garden is of a light character, the preparations recommended above are not applicable, but the treatment should be the usual treatment of light soils which has been so admirably expounded by more experienced

Rosarians in earlier *Rose Annuals*. The only modification suggested is that the moisture retaining agents recommended for light soils should be incorporated well below the level at which the roots are planted.

PLANTING OF WELL-ROOTED SPECIMENS.

In a water-logged garden Autumn planting is generally advisable, because it is more than probable that during the Spring-planting period the soil will be so wet as to render it quite unsuitable for any gardening operations. The young Rose, after being more or less tenderly removed from its quarters in the nursery, has therefore to face the always critical period following the transplanting under very uncongenial conditions, and in order to ensure its survival it is absolutely necessary that it should be furnished with an ample supply of sound fibrous roots, otherwise it will never live to see the Summer. Probably the stagnant water causes a large number of the delicate rootlets to rot during the Winter, and badly rooted specimens have not enough sound roots left by the Springtime to supply the plant with the necessary nourishment. Whatever the cause may be, the need for well-rooted plants in a water-logged garden is amply proved by experience, and when I used to unpack the plants on their arrival I could usually forecast the winter casualties accurately by an examination of the roots.

Here we are dependent on our nurserymen, and whilst no parcel will ever consist entirely of perfectly-rooted plants, there is no doubt that some firms are greater sinners in this respect than others. During one season I divided my Rose order between two firms of equal repute, each firm supplying half the quantity of each variety required. On arrival the roots of one lot compared very unfavourably with those of the other. The Roses were planted in the same beds under identical conditions, and received the same treatment throughout, yet after five years it was perfectly easy to distinguish the plants which were originally not well rooted, for they remained rather weak specimens, and never made really satisfactory growth, whilst the other lot produced excellent plants. As regards procuring well-rooted specimens, the Rosarian has matters very much in his own hands. If in placing his order with a firm of standing he points out his difficulties, and requests that particular attention shall be given to the supply of well-rooted

specimens, his requirements will usually be met, possibly at a slightly increased price, which will represent money well expended. If he meets with disappointment, the only remedy is to change the source of supply until satisfaction is obtained. But to continue planting badly-rooted Roses year after year in a water-logged garden will result in certain failure.

PRECAUTIONS AGAINST FUNGOID AND INSECT ENEMIES.

An undrained garden provides a perfect breeding ground for all fungoid and insect pests, and the necessity for perpetual and unrelenting war against them is one of the gardener's sorest trials, and least pleasant tasks. I have had the melancholy satisfaction of identifying in my former garden nearly every pest depicted in the Society's handbook, *The Enemies of the Rose*. After many years' unremitting work in the unstinted use of all sorts of remedies I am convinced that in a water-logged garden there is no such thing as a mildew-proof Rose, and that it is quite impossible to keep such a garden free from fungoid and insect pests. The utmost we can hope for is to reduce attacks to a minimum, and never let the enemy get the upper hand. The main point to remember is that nearly all the enemies of the Rose are ever present in one form or the other, although for the time being they may be invisible. If we wait until the enemy is firmly established, and his ravages are clearly apparent, half the battle is lost and our work will be trebled. There is a world of difference between the significance of that first small patch of mildew when it appears after careful treatment, and a similar patch when it appears in a garden in which no precautions have been taken. In the former case it indicates that the particular plant or part of the plant has not been adequately treated, or has become infected by some spores that have escaped destruction and the rest of the plants are probably healthy; in the second case the patch of mildew is the first symptom of wholesale infection, and will, within a few days, be followed by a general epidemic which all efforts will fail to suppress during that season, although by constant attention the fungus may be gradually reduced. Therefore act in time.

The following general precautions will assist in the suppression of pests of all kinds :--

- (1) Burn all Rose prunings and thinnings as soon as possible.
- (2) Collect and burn the fallen Rose leaves in winter.
- (3) Arrange the beds so that every plant is easily accessible, without the necessity of treading on the soil.
- (4) Allow plenty of space between climbing Roses, in particular the very vigorous kinds, otherwise within a few years they will form an impenetrable tangle, and the spray will no longer reach all parts of the plant.
- (5) Plant none but the most disease resisting Roses against walls or in other confined positions; never use any *wichuraiana* or *multiflora scandens* for a wall.
- (6) Encourage birds in the garden; they are our best auxiliaries in the fight against insect pests.

As regards particular diseases and insects, readers cannot do better than refer to the Society's handbook, but it may be of interest to add some notes as to the methods which proved most effective in my water-logged garden against the three most universal and persistent enemies of the Rose, viz., aphides, Rose mildew and caterpillars.

As regards caterpillars I found handpicking the only reliable remedy; for some reason or other arsenate of lead spray was not very effective with my Roses, although it kept my fruit bushes perfectly clean from caterpillars.

Mildew is a terrible trial in a water-logged garden, and measures which under more favourable conditions will keep this enemy in check make very little impression. In mid-Winter, preferably during a dry spell before the end of January, the plants and the soil of the Rose beds should receive an ample application of sulphate of copper solution ($\frac{1}{2}$ oz. to 1 gallon of water). From about a fortnight after pruning time down to the middle of October we must adopt a regular routine of thorough spraying with an effective fungicide once a week, or at least once every ten days, as a preventive measure. If in spite of this mildew appears here and there (as it is sure to do), the affected plants and its neighbours should be sprayed every third day until the symptoms

vanish. All this seems very troublesome, and is a great deal more than is required in ordinary gardens, but it saves work in the end, for it is marvellous how rapidly the disease spreads under favourable conditions if precautions are neglected even for a few days.

As regards spraying mixtures the sulphide of potassium solution recommended in the Society's handbook is effective, but has three serious disadvantages. Firstly, it discolours white paint; secondly, it has a most horrible smell; and thirdly, it is not effective against aphides. As these latter require constant attention throughout the growing season, we should require a second weekly spraying for this pest also, and we must really draw the line somewhere in these operations, or we shall never find time to look at our Roses and enjoy them. Let us, therefore, select a spraying solution which will deal effectively with both these enemies. A number of such are available, and the one which I have found most suitable is the Cyllin Soft Soap Solution (with added Cyllin) which is prepared as follows :

Take 1 lb. of Jeyes' Cyllin Soft Soap, and put it in an old tin, add 2 pints of rain water, and boil until the soap is dissolved. Take 3 oz. to a gallon of water.

It is effective, easily prepared and applied, inexpensive, keeps indefinitely, and its smell is not very noticeable or unpleasant; in fact, so far as I am aware, it has no disadvantages of any kind.

SELECTION OF SUITABLE VARIETIES.

Even when all possible care is taken there are some Roses that will not prosper in a water-logged garden, and the results are, in many cases, most unexpected. That the old favourite, La France, should not succeed is not surprising, but that three such hardy and well-tried varieties as Charles Lefèvre, Général Jacqueminot and Prince Camille de Rohan should prove failures, whilst varieties with reputedly weak constitutions, such as Lyon Rose, Richmond, Mme. Abel Chatenay, and many Tea Roses did splendidly without a single loss occurring year after year is certainly amazing. In the case of Charles Lefèvre and the other two H.P.'s above referred to, I should certainly have thought

that the premature decease of the whole lot was due not to inability to adapt themselves to water-logged conditions, but to some want of care on my part, were it not for the fact that a number of Hugh Dickson in the same bed and a dozen Mrs. John Laing and other H.P.'s and H.T.'s in adjoining beds, all planted on the same day under identical conditions, succeeded perfectly. Why should Liberty fail and its sport Richmond prosper? Why is it that the Lyon Rose flourished, and its more reliable counterpart, Mrs. C. E. Pearson, never survived its first winter? After many experiments I have arrived at the conclusion that no general rule can be laid down as to what particular classes of Roses adapt themselves to the special conditions of a water-logged garden, and that this adaptability, or its absence, is an inherent quality of each particular variety which can only be ascertained by actual trial. Rambler Roses, both of the wichuraiana and multiflora scandens classes are generally successful, and will usually survive prolonged Winter and early Spring floods, even if they occur during the first season after planting.

For convenience I have divided some suitable and unsuitable Roses into two lists. The first contains varieties of which I grew a fair number of specimens, for not less than three years, and in most cases for five or six years. The results observed may therefore be considered as fairly reliable, and a Rose included as successful under this heading may be planted under the conditions and with the precautions above referred to with full confidence that the results will be satisfactory and the losses insignificant. I have endeavoured to place the Roses in this list in their order of merit as garden Roses grown under the particular disadvantages of an undrained garden, and I must here put in a good word for that excellent Rose, Lady Ashtown, which should be extensively planted by everyone starting Rose growing in such a garden. I grew 24 specimens for about six years and never lost a single plant, although they were flooded every year, and in 1911 encircled by a sheet of ice for nearly a week. They bloom in the utmost profusion and with the shortest flowerless intervals from mid June until the commencement of Winter; they open well in any kind of weather, produce a large proportion of perfect flowers with little or no disbudding, and form a shapely bush.

The second list contains varieties which were not grown in sufficiently large quantities, or for a sufficiently long time to settle the question of their adaptability finally. Inasmuch as the varieties included in List II survived a winter, during which they were under water for nearly three months, there is a fair prospect of their being permanently successful.

The failures in List I should not be tried under similar conditions except for the purpose of ascertaining how to overcome difficulties and with the expectation of facing disappointments. In my garden they either succumbed during the first Winter, or if they survived never made tolerable growth or produced satisfactory blooms, but lingered on miserably, until finally consigned to the bonfire. It will, of course, be understood that any of the failures may prove most desirable varieties under more favourable conditions.

The relative liability to mildew of each variety has been indicated in List I by a letter in brackets: (*a*) signifies that the variety does not usually originate an epidemic, and if infected will respond to prompt treatment after a short time; (*b*) indicates varieties which are frequently attacked, and are almost certain to be infected if there is any mildew in the garden unless precautions are taken in good time; by adopting the measures recommended above it is not at all difficult to keep them completely free from the disease. The varieties marked (*c*) are those which in two seasons out of three will suffer from mildew to some extent in spite of all precautions, and which require constant attention (in addition to preventive measures) in order to check the enemy sufficiently to obviate disfigurement of foliage and bloom.

LIST I.

Successful Dwarf Roses.—Lady Ashtown (*c*), Hugh Dickson (*b*), Mme. Jules Grolez (*c*), Mme. Abel Chatenay (*b*), Mme. Edouard Herriot (*a*), General McArthur (*b*), Lady Pirrie (*b*), Lady Roberts (*a*), Richmond (*a*), Pharisäer (*c*), Gruss an Teplitz (*b*, really a semi-climber), Lady Hillingdon (*a*), Mme. Ravary (*a*), Jessie (*a*), Mrs. John Laing (*c*), G. Nabonnand (*a*), Betty (*b*), Fabvier (*a*), Caroline Testout (*b*), Mrs. W. H. Cutbush (*a*), Lyon Rose (*b*), Gustav Grünerwald (*a*), Climbing Mrs.

W. J. Grant (*b*) (grown as a dwarf plant), Mrs. R. D. McClure (*b*), Mrs. E. G. Hill (*a*), Avoca (*b*), Mrs. A. E. Coxhead (*a*), Corallina (*a*), Alexander Hill Gray (*a*), Duchess of Wellington (*a*), Mrs. Paul (*b*), Maman Cochet (*a*), Dean Hole (*b*), Frau Karl Druschki (*b*) (grown as standards only).

Successful Climbers—Perpetual Flowering.—Rêve d'Or (*a*), Ards Rover (*c*), Lady Waterlow (*a*), Climbing Caroline Testout (*a*), J. B. Clark (*a*), Gloire de Dijon (*a*), Reine Marie Henriette (*b*), Mme. Alfred Carrière (*a*), Reine Olga de Wurtemberg (*a*).

Summer Flowering.—François Juranville (*b*), Gerbe Rose (*a*), Léontine Gervais (*a*), American Pillar (*a*), Tea Rambler (*b*), Blush Rambler (*a*), Tausendschön (*c*), Lady Gay (*b*), White Dorothy (*b*), Dorothy Dennison (*b*), Minnehaha (*b*), Dorothy Perkins (*b*), Paul's Carmine Pillar (*a*), Auguste Barbier (*a*), Crimson Rambler (*c*), Dundee Rambler (*a*), Bennett's Seedling (*b*), Félicité et Perpétue (*b*), most of the Penzance Briars (*a*).

Unsuccessful Dwarf Roses.—Abel Carrière, Camoëns Rose, Charles Lefévre, Château de Clos Vougeot, Edward Mawley, Général Jacqueminot, His Majesty, La France, Lady Mary Ward, Liberty, Mrs. C. E. Pearson, Mrs. Edward Mawley, Mrs. Forde, Prince Camille de Rohan.

Unsuccessful Climbers.—Conrad F. Meyer, Leuchtstern, Longworth Rambler, William Allen Richardson.

LIST II.

Colleen, Cynthia Forde, Edgar M. Burnett, G. C. Waud, George Dickson, H. E. Richardson, H. V. Machin, Iona Herdman, Joseph Hill, Juliet, Lady Alice Stanley, Lieut. Chauré, Mme. Léon Pain, Mélanie Soupert, Mme. Segond-Weber, Melody, Mrs. Alfred Tate, Mrs. Foley Hobbs, Mrs. Herbert Stevens, Mrs. Theodore Roosevelt, Old Gold, Orleans Rose, Perle d'Or, Queen Mary, Sunburst.

The above lists, which do not by any means pretend to be exhaustive, certainly show that the Rosarian is not unduly restricted in

the choice of varieties which will adapt themselves to his water-logged garden, if only he on his part will take the trouble to provide them with such assistance as I have suggested. It means a good deal of extra work when compared to the task of the average gardener, but there are compensations. The beds, so laboriously prepared, will last for many years without showing the slightest signs of exhaustion. and (except during the first year after planting) will not require the help of the watering-can during the worst drought. After all, are we not amply rewarded for our labours if when we return to our garden from the Annual Summer Show of the Society we find that our Roses are, at least, just as good as many which carried off the first prizes? Of course, they are really nothing like so fine, but so long as they resemble the prizewinners sufficiently to enable us to believe the contrary, we have not done so very badly.

ROSE BERKELEY. (H.T.)

Raised by Messrs. SAMUEL McGREDY & SON, Portadown, N. Ireland.

This is a very beautiful Rose, the colour being a soft rosy pink, suffused orange. The blooms are moderately large, a good shape, and high, pointed centre, retaining the colour well. Scented. The habit of growth is free and branching. The foliage is large dark olive green, and, with me, free of mildew. It is a Mrs. A. R. Barraclough type of bloom, but of a very much warmer colour. It has been well shown during the past year. In commerce.



ROSE BERKELEY (H.T.).
CERTIFICATE OF MERIT awarded to
Messrs. SAMUEL MCGREDY & SON, Portadown.



RAMBLING REVERIES.

By Dr. A. H. WILLIAMS, Vice-President, Horsham.

What is a Climbing Rose?

Of late years there has been a tendency to arrogate the title of "Climbing Rose" to the climbing sports of Teas, Hybrid-Teas, etc., grouped along with other Roses of similar classes that never started life with a dwarf form, and the most truly climbing Roses of all—those of the Rambler type—are to be excluded from sharing the honour of this title.

These "climbing" sports of popular H.T.'s, etc., are now very numerous, and most desirable acquisitions they are in many ways. But as "climbing" Roses they are apt to be most disappointing. Some are at best only "pillar" Roses. Many of them have an annoying habit of reverting to their dwarf form; particularly is this so if they are pruned at all hard after planting. And even if they do not so revert they often give but a poor display of bloom, compared with what they had promised us as dwarfs. Whilst if trained to "climb," from their habit of growth, they are apt to be somewhat bare at the base.

I cannot think that it is just and fair to call them "climbing" Roses, to the exclusion of the rampant rovers of the Rambler type.

Now I will answer the question with which I began. A "climbing" Rose should be one that will make, on its own account, vigorous endeavours to climb. It should not be touchy and sulky about the way it is pruned when planted. It should make, from the base, great shoots of sufficient length to reach the lower branches of any neighbouring tree, be it hawthorn or holly, conifer or crab. There it should be able to retain its hold by means of its hooked thorns. (What else are the thorns for? To the gardener they are a dangerous nuisance and destructive of his clothes.)

Having then secured its first hook-hold, it should in the next season send out, from more advanced positions on the shoots of last year's growth, similar long shoots or "continuing laterals." This process will enable it eventually to throw out its terminals beyond the tipmost branches of its host. Then Summer after Summer it will add unexpected floral glory to the sober foliage or more modest bloom of the tree whose hospitality it has accepted.

That is my idea of what a "Climbing Rose" should be. It is a good description of the *wichuraiana* Rambler, and perhaps only slightly less markedly of the multifloras, the Ayrshires and the *Sempervirens*, and also of the *Banksias*, when they will grow. These are the true "Climbing Roses."

But do not think that I wish to exclude all the Noisettes, Teas and Hybrid Teas. No one would deny the climbing propensities of the old *Gloire de Dijon*, and I have seen William Allen Richardson covering the whole of the north end of a house and making a wonderful display. Whilst I would put *Mme. Alfred Carrière* very high up in the list of climbers. Why has this grand old Rose lately been left out of the annual audit of climbing Roses? Its fragrance, its profusion, its length of flowering season should surely have kept it a place in the list.

Do I hear my critics complain that these rambling climbers bloom only for such a short period? My reply to that is that some of their "climbing" sports, when they do climb, give but an indifferent crop of Autumn blooms, and at their best they cannot compare with the reckless profusion of the best ramblers. And further, some of the *wichuraiana* Hybrids, if left without Summer pruning, often give quite a respectable second crop of blooms lasting till late in the Autumn. For instance, *Albéric Barbier* and *Dorothy Perkins*, and at the present time (December 14th) one of my own *wichuraiana* hybrids (*Atalanta*) is carrying quite a creditable crop of buds and flowers.

Has not this demand for perpetual flowering climbers become somewhat of an obsession? The hybridists are still searching for the truly perpetual climber. Will they ever find it? Is it not asking rather too much of plant-nature to expect a large and vigorous grower, that has produced an astounding display of bloom for five or six weeks,

far exceeding the output for the year of any of the perpetual dwarf or shrubby varieties, to repeat the process again in the same season? We shall have to start a new society, "For the prevention of Cruelty to Plants."

Some of these ramblers flower early, some mid-season and some late. So by a judicious selection of varieties, we may be able to extend our rambler flowering season from May, with the *Banksia* (if we are lucky) to September, with quite a nice little crop of stray blooms till late in the Autumn. It must be a greedy man who asks more than this.

I have been rather harping on the *wichuraianas*, but they have always been my favourites. They give such a wonderful return for such a little trouble. They will grow in almost any soil. They are not absurdly greedy for manure. They have such fine and such varied foliage, which clothes them from the ground upwards, and with some of them this foliage is practically evergreen, as in *Jersey Beauty* and *Albéric Barbier*. The few that become "leggy" at the base can be cured by bending down some of the older stems to encourage the basal buds to break. Pruning is only required to prevent overcrowding; even if this is neglected they will still give a wonderful return. The ordinary diseases of the Rose trouble them but little; Greenfly affects them less than most; Mildew but little; and to Black Spot they are mostly impervious. And when one considers that in the coloration of flowers we now have most of the hues that are found in any other Roses, and that many of them are fragrant, I think we have a record that is hard to beat in any other group.

The rise of the *wichuraiana* has been startling. The Type, hailing from Japan, was introduced to Europe about 1873; but it was not till nearly the end of the century that we heard anything of its hybrids, for it was in 1897 that Manda sent out the first four. They were Manda's *Triumph*, *Pink Roamer*, *South Orange Perfection* and *Universal Favourite*. Not a very exciting quartette, and they did not compare favourably with the multiflora hybrids that were just then being sent out. But in 1899 we had *Gardenia*, *Jersey Beauty* and *Ruby Queen*, a very great advance. All three of them are still worth growing in the best of rambler company. These first hybrids all came from America. Then came a rush of very beautiful novelties from many countries.

By 1909 I reported on about 100 varieties. For some time I endeavoured to grow every new wichuraiana hybrid, turning out the less desirable to make room for newcomers, and besides that I was testing hybrids of my own raising.

The testing of a rambler is a lengthy process, requiring at least four or five years. For example, Emily Gray, in her first year, grew only about two feet. In her second year she gave me two blooms, but she sent up two long basal shoots. In the third and fourth years she showed great promise, and in the fifth year I was able to cut enough trusses, from the original seedling plant only, to show for the Gold Medal, and this was in spite of incessant rain during the week before the Show.

With some Roses it is the other way about; they may show great promise in their second or third years and then year by year they deteriorate, till they at last find their way to the bonfire.

One gets some astonishing results from hybridisations. I had been trying to get a climber after the style of Jersey Beauty, but with bright crimson flowers. I crossed Jersey Beauty with Edward Mawley. From this I got three seedlings. The first to bloom made basal shoots of prodigious thickness armed with the most fearsome thorns I have seen on any Rose. The flowers were of a not very taking rosy-carmine colour, but very fragrant. They were enormous—about 7 inches across when fully open; in fact, they were so heavy that the stems not only bent, but nearly always cracked. The plant developed into an ugly, leggy brute, and had to go. The second of the series developed long, flexuous stems with trusses of single blooms—blush-white and edged with carmine—almost exactly like Evangeline. So it was not wanted. The third and last was another vigorous, thick-stemmed plant. In the second year it threw two or three large single blooms of a brilliant scarlet crimson colour, and I began to think I had got what I was seeking. But each year the plant grew more and more leggy and more and more ugly, and it never gave me more than about half-a-dozen of these single blooms out at once; so it, too, found its way to the bonfire.

With the outbreak of the Great War one had to take a more serious view of life than dabbling with hybridisation. The growing of Roses had to give way to the growing of food. Then war-work and post-war work banished me for six years to the murky atmosphere of Manchester, where I could not give the same attention to Roses as I had previously done. And after this interval I find so many fresh introductions, and so many others coming in each year that to test all the *wichuraianas* for myself is now quite impossible. The varieties have become so numerous that I should think it unlikely that anyone would now have a complete collection. Nor do I think this desirable; for to continue to propagate the less deserving varieties can only add confusion to an overcrowded list.

By no means all the *wichuraiana* hybrids develop the Rambler habit. Of any batch of seedlings there will probably be an uncertain proportion which will remain dwarf and which may be perpetual flowering. Of this type Messrs. G. Paul & Son introduced a number, such as Amber and Iceberg; but they never secured a very firm hold, for the comparable type of Dwarf Polyanthas were more attractive. But we may yet have Dwarf perpetual-flowering *wichuraianas* of outstanding merit.

Then again there are the not-quite-climbers, very suitable for pillars or small arches. I need only mention Paul's Scarlet Climber. What a thing of dazzling beauty it would be if it would only really climb and, at the same time, keep its other excellencies.

In my rambling amongst the *wichuraianas* I have rather neglected the multifloras. This is hardly fair to them, for the first of these appeared a few years in advance of the earliest *wichuraianas*; and had the latter not been given to us in such profusion we should more thoroughly have appreciated our good fortune in the possession of such fine climbers as Crimson Rambler, Electra, Tausendschön, Mrs. Flight, Goldfinch, Tea Rambler, Blush Rambler, Braiswick Gem, and others. And we must not forget that many of the *wichuraianas* probably owe some of their beauty to a strain of multiflora blood in their pedigree.

The old Ayrshires and Sempervirens groups, whilst fully agreeing with my definition of true climbers, are lacking in the range of colour

given by the newer groups. I am sometimes asked what Roses I would recommend for climbing purposes, so I will here give short notes of a few, with their colouring and approximate flowering period.

WHITE.

Purity ... *Early and mid-season.* Very free flowering, pure snow-white. Medium sized, semi-double. It has the great merit of shedding its petals from the spent blooms, so that they do not remain on the plant to mar the snowy purity with blobs of brown decay. This is one of the very best and should be grown much more than it is.

Sanders White ... *Late.* Fine clusters of pure white double rosettes. Exceedingly vigorous and sinuous, very free blooming, not liable to disease. I know no better late flowering white, but an unnamed seedling that I saw in the Wisley trial ground may prove to be as good.

Snowflake ... *Late.* Also excellent, very vigorous and sinuous, with fine glossy, light-green foliage. Large trusses in great profusion of very double flowers, slightly larger than Sanders White. At times there is a faint blush tint to the petals.

(I do not advise the white sports of Dorothy Perkins or Lady Gay, they are too prone to "throw back" to pink blooms.)

BLUSH WHITE AND PALE PINK.

Mme. Alfred Carriere *Flowers early and late.* White, tinted blush. (a Noisette). Semi-double, very fragrant. A very fine old Rose that should not be dropped out.

Evangeline ... *Late.* Very vigorous and sinuous. Fine foliage, large trusses of large single flowers, blush white-edged with carmine, very fragrant.

- Dr. van Fleet** ... *Mid-season.* Large double flowers of soft-pink colour. Very vigorous.
- Yvonne** *Late mid-season.* Fine trusses of double rosettes, soft pink in colour and fragrant.
- Lady Godiva** ... *Late.* A sport of Dorothy Perkins, which it resembles in every way, except that the blooms are a delicate flesh pink. It is very beautiful.

ROSE PINK.

- American Pillar** ... *Mid-season.* Sturdy stems of rampant growth, fine large glossy foliage, very profuse bloomer, with large trusses of single blooms, deep rose-pink with white eye. A grand climbing Rose.
- Dorothy Perkins** ... *Late.* Clear pink. Too well-known to need description. It is so good that it is sometimes looked upon as common. If not Summer-pruned it will give quite a good crop of Autumn blooms in some seasons. Lady Gay is very similar, but has more flexible stems and more pendant trusses.
- Minnehaha** *Late* A very rampant sinuous grower and profuse bloomer. Large pyramidal trusses, more upstanding than Dorothy Perkins and rosettes slightly smaller and slightly deeper in colour. A fine variety, but slightly liable to mildew.

SALMON AND COPPERY PINKS.

- François Juranville** *Mid-season.* Very vigorous and sinuous, with fine foliage, blooms freely and for a long period, with largish double blooms of bright salmon-rose. Fragrant. One of the best, and should be much more grown than it is.

Léontine Gervais ... *Mid-season*. Medium trusses of thinly double medium-sized blooms. Buds coppery, opening to yellowish salmon pink. Fragrant. A very beautiful variety for decorative work.

Albertine ... *Mid-season*. Large thinly double flowers, reddish high pointed buds opening to coppery salmon pink.

Tea Rambler ... *Early*. Vigorous grower with fine foliage. Coppery pink, paling to light salmon pink.
(multiflora).

CARMINE AND ORANGE.

Alexandre Girault ... *Early*. Trusses of medium sized very double flowers. Coppery buds opening to carmine with orange base to petals. A striking variety at its best, but colour easily spoilt by rain or strong sunshine.

YELLOWS.

Emily Gray ... *Early*. Sturdy, very vigorous growth. Distinctive foliage, very large, glossy, bronzy green. Takes two or three years to establish, and then blooms profusely with long-stemmed trusses of semi-double golden yellow flowers, which hold their colour well. Apt to become leggy at the base unless some of the stems are trained horizontally; then it will cover an extensive area.

Albéric Barbier ... *Early*. Exceedingly vigorous, of sinuous growth, fine foliage almost absolutely evergreen. Very prolific. Buds yellow, opening into very double creamy white flowers. Will give a fair crop of second blooms till late in the Autumn. One of the very best climbers.

Jersey Beauty. *Early.* Growth, foliage and colouring similar to Albéric Barbier, foliage perhaps even more evergreen. Buds light yellow, opening to creamy white single flowers with fine stamens. A very fine decorative variety with its up-standing trusses.

Goldfinch ... *Early.* Clusters of deep yellow rosettes, paling to creamy yellow.
(multiflora).

Electra ... *Early.* Trusses of pale yellow rosettes paling to creamy white. Takes a few years to establish, and then very prolific and beautiful for its short season.
(multiflora).

CRIMSON.

Excelsa ... *Late.* Bright scarlet crimson rosettes in fine trusses. Habit and foliage very similar to Dorothy Perkins, though not so vigorous. It is the best of the crimson flowering ramblers, and is not subject to mildew, as is Crimson Rambler.

Hiawatha ... *Late.* Large trusses of single crimson blooms with white eye. Colour is often disappointing in wet weather.

N.B.—I have not included in this list some very beautiful Pillar Roses like Paul's Scarlet Climber and Mermaid, for with me they never really climb.

MAY WETTERN.
(H.T.)

Raised by ALEX. DICKSON & SONS, LTD., Newtownards, Co. Down.

A very pretty Rose of a rich, deep pink colour. The blooms, which are pointed, are produced singly on erect, long, stiff stems. Scented. The habit of the plant is vigorous and free, the foliage a dark green. A useful bedding Rose that, it is claimed, will supersede Mme. Abel Chatenay, but we must wait and see. This Rose was exhibited from under glass.



MAY WETTERN (H.T.).
GOLD MEDAL awarded to
Messrs. ALEX. DICKSON & SONS, Newtownards.



MILDEW PROOF ROSES.

By GEORGE M. TAYLOR, Edinburgh.

Many growers of Roses are of the opinion that there are varieties available which are immune from mildew, and there is a constant demand for a list of sorts of this desirable character. Mildew is a most disfiguring disease, and it may be said to be a serious source of annoyance and worry to quite a number of cultivators. It is easy, therefor, to understand how anxious many growers are to obtain a list of kinds that are mildew proof. Such Roses would certainly save an immense amount of work in spraying, and would also save a lot of money that is annually spent upon materials for the destruction of this disease. Lists of mildew proof Roses have appeared from time to time; growers have tried such kinds out in the hope that their troubles would be over. In the majority of cases, however, those alleged mildew proof Roses have succumbed to the disease.

I question if there is actually any such thing as a mildew proof Rose, and rosarians who opine that there is simply live in a fool's paradise. Under certain conditions—meteorological and manurial—almost every Rose will contract mildew. It is a fact that certain varieties do possess a very great power of resistance to this disease and, on the other hand, there are sorts which will contract it very badly. When grown under certain conditions, however, Roses that are considered absolutely mildew proof are apt to suffer just as badly as those which are known to be prone to the disease. When I was young and innocent I was wont to declare that certain Roses were mildew proof. I have learned otherwise.

It must not be thought that I am a pessimist in regard to this disease, and although I write that there is probably no such thing as a mildew proof Rose, growers and lovers of the flower must not consider it a hopeless matter to get rid of the disease. It is hopeless, nevertheless, to select some names from a list of alleged mildew proof Roses, and then to think that one's troubles are over. As I have already stated, under certain conditions and combinations of conditions, almost any Rose will become affected. But mildew, bad as it is, need never be any trouble to the grower who takes some little pains in the cultivation of his plants.

At this point I should like to say that the mere spraying with some substance is not a remedy. It is work that is quite unnecessary and is a waste of time. If mildew is attacking the Roses there is something wrong, and spraying is only an anodyne and is certainly not a cure. Stop spraying and mildew re-appears if conditions are favourable to its development. Under certain circumstances spraying is, perhaps, necessary. If, for instance, one has, unfortunately, an outbreak of mildew upon the Roses, a spraying should be given in order to kill the spores of the disease and prevent, if possible, it spreading further. But if you have mildew upon your plants it is folly to think that spraying will cure it. It will, assuredly, clear it off for the time being, but it will recur unless something else is done to prevent it.

Let us consider what an outbreak of mildew means. If plants become infested it may be taken for granted that they are not healthy. Spraying with liquid spore destroyers will not restore health. If a tithe of the labour and money that is expended on spraying the foliage were spent at the other end of the plants—that is, the roots—it would be better for everyone concerned. When I say the Roses are not healthy I mean that they have become debilitated or weakly owing to soil conditions that are wrong. The very fact that mildew has broken out in a bed of Roses should be enough to tell the cultivator that he has surely erred in his methods of growing the plants. When a plant contracts mildew its constitution has been weakened in some way, and until this is remedied disease will always be a trouble. Consider the briars growing wild in the hedgerows. They are robust and healthy. Take those briars into captivity and submit them to the conditions—

soil conditions—of the named varieties of our gardens and mildew will soon disfigure their foliage. I have seen this happen over and over again.

The chief cause of mildew is a system of manuring that is wholly wrong. Unthinking writers of a past generation have preached the gospel of feed your Roses well with manure—cow manure if you can get it—and that the Rose is a gross feeder. Yes, Roses can do with liberal feeding, but, like humanity, that sort of thing opens up liability to disease unless this feeding is of the proper character. Overfed Roses are unhealthy—they are asking for mildew and every other disease known to the genus. Shrewd growers are aware that there is such a thing as Plant Hygiene, and until the average grower recognises this fact we will have trouble in gardens with diseases of all kinds. How rarely in nature—amongst wildlings—do we see disease.

After all, our Roses—for the most part—are wildlings, at least their root system is that of a wild plant. This wild plant which carries the scions of our modern Roses is brought from its native conditions and fed in a most indiscriminate manner with manure. The soil, too, very often, is literally poisoned with manure or the consequences of liberal manuring. Need we wonder that we have trouble in the way of disease? Indiscriminate manuring, year after year, will not do if healthy plants are required. And in order to get healthy plants we must have soil that is free from any suspicion of sourness promoted by overdoses of manure. We shall now examine the question from this aspect. Its solution means a clean bill of health.

The general method of cultivating Roses is to add a liberal amount of manure in the form of dung of some kind to the ground upon which they are to be grown. The plants are put in; in due season they are fed from time to time with liquid manure. In the following year a mulch of manure is applied, and this is again supplemented by a dose or doses of liquid manure. This system of feeding goes on from year to year. Soils that are treated in this liberal fashion soon become infested with humic acid; in a word they have become sour. The roots sicken, and the plants are weakened. In such a condition they readily contract disease. That is one side of the matter. I shall deal

with this a little further on. The other is that to all appearances the *Roses* are thriving well. This satisfactory state of affairs may be apparent from the strong wood and growths upon the plants. Despite this seeming health, however, the *Roses* are suddenly infested with mildew. In such circumstances the cause is plain. The growths, forced by nitrogenous manures, are soft and flabby ; their wood, spines, and foliage cannot resist the spores of the disease.

The use of manures containing an excess of nitrogen, promoting, as it does, what appears to be strong growths, is really a prolific cause of mildew. The strong shoots are, of course, most desirable and are the aim of every grower, but an endeavour must be made to render them less liable to mildew attack than they usually are. This can be done by potash. That excellent plant food is generally deficient in soils, and this defect must be made good. Potash has the effect of hardening the wood and foliage ; the latter is rendered tough and leathery, and these characters make it practically immune from the common diseases of the *Rose*. Tender foliage such as that promoted by the use of forcing nitrogenous manures cannot stand up to adverse weather conditions, and when a cold spell comes after a run of heat an outbreak upon it is almost a certainty. That is not so in the case of foliage that has been fortified by the use of potash in the soil. Its tough constitution is its salvation.

There are several ways of applying potash to the soil. It can be had in the form of sulphate of potash, muriate of potash and kainit. I favour the latter as I consider it the safest form to use. The time to apply it is in the Autumn during October or November, and it should be put on at the rate of from five to six ounces to the square yard of surface. It is best lightly pointed into the soil with a fork. Kainit requires the action of Winter rains and snows to dissolve it and render it soluble for plant food in the form of potash, hence the reason for applying it in the Autumn. An application such as this need only be given every alternate year. Sulphate of potash may be applied in the same way in Spring in the month of March, but two ounces to the square yard of this substance will be sufficient. Growers who have had trouble with mildew upon what appear to be strong growing, healthy plants would do well to try an application of kainit in the Autumn, as it will likely solve their difficulties in this respect.

Turning now to the garden where manuring has been carried on upon the beds over a series of years. As already stated, such soils have become sour through humic acid forming in them as a result of the decaying matter accumulating over several years. In such gardens the soil may be rendered sweet by an application of lime. I think that the best time to apply this is in Spring after the pruning has been finished. The beds are then forked over, and when that has been done the lime may be put on. It must not be dug in. It is simply sprinkled over the surface of the beds or borders, and the action of the weather will carry it down through the soil. It purifies and sweetens as it goes down. Proper lime for the purpose is easily obtained from any firm dealing in horticultural sundries, and it is cheap. The best method of applying is to put it on so that it resembles a powdering of fine snow. This runs out about four ounces to the square yard. Lime need not be applied annually. In most cases an application every third year will be quite sufficient.

In addition to what I have written in regard to manuring and liming, I think it well to add the following remarks. I do not believe in applying a mulch of manure in Autumn and allowing it to lie on the surface all through the Winter months. Such a mulch is not necessary, and it is bad especially on heavy soils. It most effectively, for example, excludes light and air from the soil, and, consequently, the roots are kept in a wet, sodden condition for a long period, and sufficiently long enough to do them untold harm. This mulch is one of the factors that induce ill-health in the plants. It is best to keep the soil thoroughly exposed during the Winter, and so let it have the benefit of any air and sunshine that is going. If our winters were one long spell of severe, dry frost, a mulch would be beneficial, but the general experience is wet and damp. Under such conditions the soil requires all the aeration it can possibly get in order to keep it in a healthy state.

In regard to mildew one has also to consider the frequent aeration of the soil. The proper way to do this is by the use of the Dutch hoe. The Rose beds should be hoed over at least once a week. By this means a constant mulch of loose soil is maintained upon the surface of the beds, and air and sunlight—real health-giving factors—are freely absorbed. Moisture, too, by this means is conserved in the soil. If

manure has to be applied to established beds in order to fortify the soil it can be done by digging it in either in Spring or in Autumn. It should not be allowed to lie on the surface. I prefer to apply the manure in Spring after pruning has been done. In some gardens the Rose beds are planted with a carpet of Violas. If the Roses in such gardens are giving satisfaction, nothing need be said, but if not, the remedy is simple. Remove the Violas. You cannot maintain a health-promoting mulch of loose surface soil if the beds are carpeted with other plants.

There are many growers of Roses who must be tired of spraying their plants every season in order to keep down mildew. The Roses, as I have stated, may be quite healthy, but the disease is still a trouble. Those who are afflicted in this way should try the Autumn application of kainit. In gardens where the Roses are not in good health, and where ample supplies of manure have been added to the soil, let lime be tried.

RUST.

By Major A. D. G. SHELLEY, Vice-President N.R.S., Guildford.

As Rust has been very much in evidence this year, especially in Scotland and in the North of England, it may be useful to review our knowledge of the disease, especially as it is now strongly suspected that the stock on which, and the soil in which the plants are grown affects their susceptibility to attack. In the Society's handbook "The Enemies of the Rose," Mr. John Ramsbottom, M.A., has given a very full account of the Rose Rust fungus, which is technically known as *Phragmidium subcorticium*, so there is no need to go into great detail here, but a brief general résumé of the life history of the fungus will be of help in intelligently combating attacks by the organism.

The fungus manifests itself in early Spring as small, orange coloured pustules on the underside of the leaves, and as similarly coloured patches on the stems, arising from a persistent mycelium growing under the bark. The pustules, by breaking through the outer skin of the leaves and the stem patches discharge immense numbers of very small round spores called *æcidiospores*, which grow as soon as they fall on leaves and stems. About June another type of bright, orange-coloured spore, the *uredospore*, is produced by the fungus, and this spore also starts growth immediately, but it is not generally regarded as such a prolific source of infection as the *æcidiospore*. These two spore forms are succeeded by a third type known as *teleutospores*, which do not germinate till the following Spring, and which by reason of their thickened walls retain their vitality throughout the rigours of winter, and serve to perpetuate the fungus from year to year. The *teleutospores* are divided by cross walls into from six to eight compartments, from each of which a transversely divided germ-tube is eventually protruded.

From each division a short growth arises, terminating in a spore known as a sporidium, and this on germination produces the Spring pustules and æcidiospores. Under the microscope the ripe teleutospore looks very like a bulrush with a jet-black head and short translucent stalk. Apparently the stalk is somewhat sticky, for those spores which become detached from the cushions or beds on which they grow remain adherent to the adjoining parts of the leaf for some considerable time.

From this brief account of the life cycle of the fungus of Rose Rust it is manifest that its control must be an extremely difficult matter. The fact of the growth being inside the tissues of the host plant protects the organism against the external application of any fungicide which is harmless to the plant itself, so that spraying or dusting is useless except as a check to the germination of newly fallen spores. Of course if foliage and stems could be continuously and completely covered with fungicide for the period of a month, spore germination might be stopped; but as this is obviously impossible it must be recognised that spraying can only hinder the spread of the disease and cannot cure it once it is established. Spraying in early Spring before the sporidia have developed would seem a more valuable control than later applications of a fungicide.

In cases where the Summer control of fungal disease can only be partially successful, it is often possible to obtain better results by measures directed against the perpetuation of the fungus from year to year, and this would appear to be the case with Rust. This fungus, as has been already said, maintains its existence during the winter months by means of its perennial mycelium and the teleutospores. The mycelium can be exterminated by cutting off diseased branches, where this can be done without injury to the plant, and where this is not possible by cutting out all wood which shows signs of the disease and dressing the wounds with a fungicide. As for the teleutospores they must either be on the ground, on leaves adherent or fallen, or on the stems. The removal of the top soil of the Rose bed for a depth of three inches and its replacement by soil from another part of the garden should clear the ground of teleutospores, while the collection and burning of all foliage should dispose of those on the leaves. To complete the elimination of infection it is suggested that the affected Rose plants

should be sprayed twice in mid-winter with a solution of half an ounce of sulphate of copper to the gallon of water. The first spraying should be done before and the second after the exchange of soil has been made.

It is a recently established fact that plants grown in potash starved soils show marked susceptibility to rust, and it is therefore recommended that the measures previously recommended for combating the disease should be supplemented by treating affected Rose beds in Autumn with a dressing of two ounces of sulphate of potash to the square yard.

The prevalence of rust in some gardens and its absence in others must have struck many observant Rose growers as a curious phenomenon. A very possible reason for these contradictory conditions is connected with the stock on which the plants are grown. A rosarian of the highest eminence is convinced that the existence of rust on cultivated Roses in this country must be attributed to the use as a stock of *R. Laxa* and to a much lesser degree, *R. rugosa*. He undoubtedly has very good grounds for this opinion, and his wealth of experience is so great that I, for one, intend to follow his advice and eschew the use of *R. Laxa* as a stock.

PORTADOWN FRAGRANCE. (H.T.)

Raised by Messrs. SAMUEL McGREDY & SON, Portadown, N. Ireland.

A very lovely Rose of somewhat variable colouring, orange pink. The blooms are very large, well formed, and carried singly on stout stems. Strong verbenascent. The foliage is a handsome dark green, the growth vigorous and free of mildew. To those who look for fragrance, it is to be found in this Rose. Ideal for bedding. Awarded the Clay Cup for the best new scented Rose of the year.



PORTADOWN FRAGRANCE (H.T.).
Awarded the CLAY CHALLENGE VASE. Raised by
Messrs. SAMUEL MCGREDY & SON, Portadown.



THE UNPLANNED ROSE GARDEN.

By A. J. MACSELF, Reading.

Well-ordered gardens may be designed and planted by those who have ample space, leisure and ability to carry out their schemes; those who have wealth and prefer to spend it rather than dig and make beds and paths may secure their Rose gardens of ornate design with balancing numbers of varieties in tastefully blended or contrasting colours, and we will look upon the glorious spectacle of the well-planned garden with unstinted admiration. For the comfort of those who have but small gardens, little leisure, slender means and, perhaps, none of that artistic skill which can evolve designs to meet the approval of the critics it is well to remember and to acknowledge that the Roses themselves pay little regard to the design of their bed, and many a gorgeous bunch of fragrant blossoms may be cut from the unpretentious allotment where the near neighbours of the Roses are cabbages and potatoes.

Indeed one of the greatest among the many virtues of the Queen of Flowers is that she will disport her regal raiment in the humble cottage garden as readily and as graciously as in the spacious policies of the Dukeries, and we have it on the records of the National Rose Society itself that Roses raised by working men have won cups and medals in competition with world-famed champions.

Our great Society has attained its proud position because it has always been wise enough to recognise these truths, and has not only welcomed the smallest of Amateur growers to its Membership, but has

studied their interests and disbursed information for their benefit as well as for the owners of extensive and finely-appointed gardens. If it were essential that one who has but sixty by twenty feet of ground to cultivate should mark out a geometrical design and plant stipulated numbers of some five or six carefully selected varieties the total numbers of rosarians would never have reached half their present prodigious figures; and whilst we have not a word to say against the formal Rose garden, we find unbounded satisfaction in the knowledge that hundreds and thousands of unmethodical but keenly enthusiastic owners of small gardens have started with a dozen plants, leaving selection of varieties to the Nurseryman, and thereafter have added by ones and twos such other Roses as have appealed to them, putting them here and there, wherever there appeared to be convenient space. Thus many an original dozen has grown by easy stages to a hundred and more, and although there has never been an attempt at orderly arrangement, these gradually evolved Rose gardens fulfil their whole purpose—they give joy and satisfaction to their owners and delight those who are privileged to see them in all their Summer gaiety.

What matters it that the rich colouring of Hortulanus Budde is seen between the Morses, Mabel and Mrs. Henry? Our enthusiast sees no artistic shortcomings in his mixture of colours, but he sees in each a flower he can admire, and from these he glances at his Ophelia and Independence Day and tells how many fine blooms he has cut from each. Betty Uprichard and Shot Silk throw just as many flowers growing behind Emma Wright and Madame E. Herriot as they do in the Lord Lieutenant's garden, where each has a place in a bed of fifty of its kind. One cannot imagine a really keen rosarian who has scope for only a few dozen plants being content to have them all of one variety; the half of his interest lies in gathering together the widest possible assortment of varieties that he may critically compare them, individually admire them, and that when the season is unkind to one he may find another doing exceptionally well.

When one has read some learned treatise on the Rose garden, with its detailed description of site and aspect, and of the rich unctuous loam which should constitute the root run for the plants, it is pleasant to call to mind the remarkable contrasting situations and soils in which

Roses have been seen in flourishing condition. It is a moot point whether the constant reiteration of the fact that Roses should have a deep, strong loam has not in reality kept many from embarking upon the cultivation of the flower who might for years have been enjoying a satisfactory measure of success in a hobby of universal appeal. Is there, indeed, any flower in British gardens which can be found flourishing in so great a variety of soils as the Rose may be?

We have grown them on the stiffest of brick-earth, on the black silt of reclaimed marshes, on a harsh gravel over chalk, and in an ancient garden of a century's cultivation. We have grown them in Scotland, on both the East and West coasts of England, in the Midlands, and in the inner zone of London's suburbs, and we have seen them growing in the miners' gardens of the North of England and of Wales, and on the roofs of London's city offices. These are facts which justify the declaration that the Rose is well-nigh a plant for every garden, and with the one exception of the totally sunless corners it should seldom be accepted that Roses will not grow until the matter has been put to a thoroughly practical test.

That there are limitations to the possibilities of many gardens must be candidly admitted. Not all varieties that were tried on my chalky hillside garden proved equally successful, and as the *Rose Annual* has abundantly shown, there are certain varieties that behave particularly well in town gardens. In this connection it is well to bear in mind that what may be perfectly good in the suburbs of London, where, as a matter of fact Roses do as well as anywhere in Britain, may find conditions which prevail in the gardens of manufacturing towns of Staffordshire, Lancashire or Yorkshire severely trying; but even in those unfavourable quarters some Roses flourish.

It would be unfortunate should any remark of mine concerning the good nature and adaptability of Roses be taken to infer that careful culture is non-essential. Whilst it has been emphasised that Roses will grow in poor soils it is not suggested that they can succeed unless reasonable steps are taken to improve the quality of unfavourable mediums. In every case the trenching and manuring always urged as necessary preliminaries to Rose planting must be very thoroughly

carried out, and although fresh, rank manure should never be brought into close contact with roots of Roses, feeding must be the more generous when the natural condition of the soil is known to be poor. My purpose is by no means to advocate careless Rose culture, but solely to encourage those who cannot lay out a Rose garden on an elaborate scale, but who desire to grow Roses, to plant as they are able, and to enjoy to the full the pleasures of a hobby that may be as keenly pursued in what I have termed an Unplanned Rose Garden as it would be in the most skilfully designed and tastefully planted of rosaries.

ROSES AS STANDARDS.

By F. S. HARVEY CANT, Colchester.

The utility and charm of Standard Roses—as distinct from Bushes—has already been a feature of many articles in the *Rose Annual*, and must be so apparent to all observant Rosarians—that these notes will probably be most usefully employed in determining those varieties whose characteristics entitle them to admission to the class of super Standard Roses.

In these days it seems to be a cardinal sin to be old-fashioned; the correct thing is to regard the Victorians as out of date—so shockingly behind the times, you know—but some of us in this wonderfully enlightened age can still find time to admire the brush of a Gainsborough, the pen of a Shakespeare, or the touch of an Orlando Gibbons, and similarly—in spite of multi-coloured Rose novelties with their transient brilliance—we cannot in seeking the perfect Standard Rose entirely discard the more lasting and dignified charms of the hardy friends of yesterday, although I would not go so far as to include Suzanne Marie Rodocanachi and Killarney, mentioned in our President's article in the *Rose Annual* of 1913.

Where amongst the hundreds of novelties of to-day shall we find the equal of Caroline Testout, Hugh Dickson, Frau Karl Druschki and Madame Abel Chatenay as standards, presenting with characteristic grandeur their annual living bouquets of substantial flowers, lingering for days of enjoyment, untroubled by the wild freaks of modern climatic conditions, instead of yielding a fleeting brilliance which evaporates before the noonday sun.

How vividly that thought brings to mind the words of my dear father, apropos of the renewed popularity of *Blanc Double de Coubert* for hedges :—

“ Many good Roses have gone and are forgotten, but many are left. There is room for both old and new, but hesitate before supplanting old friends with the fleeting brilliance of the new.”

There are, of course, exceptions—*Betty Uprichard*, *Madame Butterfly*, *Etoile de Hollande*, *Mrs. Henry Bowles*, *Golden Emblem* and *K. of K.* will be found high in the analysis of the *National Rose Society*, and rightly so, for they are unquestionably of the first two dozen.

As a professional Rose grower, perhaps instinctively detecting those many sites literally asking for a Standard Rose, one wonders why more are not planted in gardens so impaired by their absence.

Initial cost may be largely responsible, but for the selected two or three year old briar of the heavy lands of the Eastern Counties—so strongly advocated in *Foster-Melliar's Book of the Rose*—there is little prospect of substantial reduction in price so long as the present day labourer shrinks from the task of gathering, and there is the recognised loss of 30% to 40% in the final crop; moreover can the natural sources of supply meet the demand indefinitely?

Yet surely 10 years of beauty from a corner which may grow little or nothing else is not extravagantly purchased at 4s. 6d. for a Standard Rose.

How easy to brighten that lawn with a few really good Standards! How simple to break up the prevailing flatness of the average Rose garden by including a few Standards or half-Standards as needed, and—where finance is not the prime consideration—what a charming effect is obtained by planting Standards, half-Standards and dwarf-Standards to form an amphitheatre around an arena of Bush beds.

The head of a Standard Rose is one of its features; it is therefore obvious that vigour is a main desideratum in the variety to be employed. In some cases vigour is transmuted to greater utility when the Rose is grown as a Standard, and varieties like Margaret Dickson Hamill and Avoca, instead of producing the long awkward shoots of their dwarf type, will become branching and bushy, yielding a much higher percentage of bloom.

Others with the unfortunate pendent tendency are more disposed to look you in the face from the 3-ft. stem of a Standard than from a Bush.

On the other hand such Roses as Candeur Lyonnaise, although of ample vigour, cannot be propagated in this way because the scion expands more rapidly than the arm of the stock, and the result is a faulty union.

There are, however, comparatively few varieties which, unsuccessful in the dwarf form, yet thrive as Standards, although several of the Pernetianas—as The Queen Alexandra Rose—are less excitable on the Standard briar, and so less prone to their family failing of dying back.

For ordinary purposes I suggest as very suitable the following order of merit, showing the old and new varieties in their respective categories :—

PRIOR TO 1910.

LARGE FLOWERED.

Hugh Dickson
 Caroline Testout
 Frau Karl Druschki
 La Tosca
 Joseph Hill
 Molly Sharman Crawford
 Lady Ashtown
 Mélanie Soupert
 Mrs. Foley Hobbs
 Madame Jules Bonché
 J. B. Clark
 La France

SMALL FLOWERED.

Madame Abel Chatenay
 General MacArthur
 Lady Hillingdon
 Madame Ravary
 Lady Pirrie
 Lady Roberts
 Anna Olivier
 Duke of Edinburgh
 Madame Jean Dupuy
 Mrs. Herbert Stevens
 Richmond
 W. A. Richardson

SUBSEQUENT TO 1910.

LARGE FLOWERED.

Los Angeles
 Etoile de Hollande
 Mrs. Henry Morse
 Mrs. Henry Bowles
 Margaret Dickson Hamill
 Capt. F. S. Harvey-Cant
 F. J. Harrison
 Rev. F. Page-Roberts
 William F. Dreer
 Arthur Cook
 The General
 Lady Inchiquin

SMALL FLOWERED.

Betty Uprichard
 Madame Butterfly
 Madame E. Herriot
 Shot Silk
 Ophelia
 Golden Emblem
 Covent Garden
 Red Letter Day
 Independence Day
 K. of K.
 Angele Pernet
 Charles P. Kilham

The little Polyantha Roses—rapidly growing in popularity—must not be overlooked. They may be usefully employed for many of the purposes usually confined to their less modest relations, and, moreover, quaint and pretty as they are at all times, grown in tubs they provide an air of formality and charm which cannot be denied.

Some of the best for Standards are : Ellen Poulsen, Mrs. Cutbush, Orleans Rose, Alice, Golden Salmon, Mrs. Taft, Coral Cluster, Orange King and La Reine Elizabeth.

Nor can Weeping Standards be wholly excluded from these notes, although their purpose is too obvious to need special mention.

The enumeration of a few good varieties may be of interest. Such are Albéric Barbier, Dorothy Dennison, Emily Gray, Excelsa, Gardenia, Hiawatha, Jersey Beauty, Snowflake, Yvonne and Minnehaha.

With a gale of something approaching a hundred miles an hour raging as I write, comes a reminder of the damage done to Standard Roses all over the country through inadequate support, and it is perhaps timely in conclusion to sound a note of warning in this connection.

The stem of a Standard Rose with a large head, even on a really old briar, is not strong enough support without the aid of a good stake, which needs occasional renewal—BEFORE THE GALE ARRIVES!

There is one other warning I would give in regard to planting. It is not wise to plant Standard Roses too deep in order to obtain uniformity, as they usually die! The depth should correspond with the soil mark—left when the tree is lifted—generally easily discernible some six inches above the root. This should correspond with the surface line of the earth when the tree is replanted.

I have known cases where trees have been deliberately sunk into the subsoil for some 2-ft. in order to reduce their height—with disastrous results.

Standard Roses have vast pleasure giving potentialities, and if selected with due regard for soil and position, they will, for such as help them to do their duty, provide endless joy and beauty.



VIOLET SIMPSON.

(H.T.)

Raised by JOHN SIMPSON, South Queensferry, N.B.

This Rose was raised by an Amateur, and a chance seedling, and it is doubtful if it was staged at its best. It is a fine, well-shaped Madame Butterfly type of bloom, of a bright cerise colour, with a yellow base. The plant staged was of vigorous habit, and free of mildew. I could not, however, detect much scent. This is to be regretted, because it is quite one of the best novelties of recent years.



VIOLET SIMPSON (H.T.).
CERTIFICATE OF MERIT awarded to
JOHN SIMPSON, South Queensferry, N.B.



A FEW ROSE GEMS.

By F. GLENNY, Walsoken, Wisbech.

Much has been written about the beauty of many of our Hybrid Teas, and there are some lovers who are, perhaps, only acquainted with those Roses of stereotyped type of growth for bedding purposes, and who overlook some of the lesser known varieties and species which would add charm and interest to the Rose garden.

Amongst the various introductions of recent years there are certain gems which some of our newer members would be well advised to try, and picking out a few at random from those I have grown I can strongly advise anyone desiring a little variation in their Rose garden to give them a trial.

Commencing with the species, perhaps *R. Moyesii* takes pride of place. This Rose when once planted is best neglected as regards pruning. Quite recently I came across a specimen 10 feet high, and as many feet across, in full bloom, that had the appearance from a distance of a lovely specimen flowering shrub. A more beautiful sight it would be difficult to imagine, with literally hundreds of glorious, dull, chocolate-red single flowers, which revealed the most exquisite centres of pollen-laden anthers. In the Autumn it was again a beautiful sight, covered with large, brilliant orange red pear-shaped hips. This Rose does not come true from seed. *Hugonis* is a fitting companion to *Moyesii* to form a specimen shrub. Blooming early in May it is more prolific than most of the species in wealth of golden yellow single blooms set off by most graceful foliage, which remains attractive all the Summer, even after the blossoms have departed. *Rosa spinosissima altaica* is a Rose to suit the poorest soil; in fact the more it is starved the greater

the quantity of lovely creamy white single flowers it will produce. This Rose has been very aptly described as the aristocrat of the Scotch Briars.

R. sericea pteracantha is a Rose that should be grown for the decorative value of its shoots, which are covered with immense flat translucent red thorns that are most attractive in the sunlight. I advise pruning this variety rather hard, as it is on the young wood that the better colouring of the thorns is obtained. The blooms are of an insignificant white colour.

R. rubrifolia is another species with foliage of a lovely purple grey sheen, well worth growing. Ladies find the shoots of this Rose particularly useful for arranging with Roses in the house.

R. Willmottiae has, perhaps, the most decorative foliage of any Rose, the slender and graceful growths of almost maiden-hair fern like appearance making it indispensable for table decoration; the blooms are pink.

There are several of the newer species well worth a trial; amongst them I would put *R. xanthina*, a hardy Rose of rare beauty with pale yellow flowers and fragrant foliage; this makes a shrub 4 to 6 feet high. *R. Davidii* is said to rival *R. Moyesii* as a garden plant for its fruits alone.

R. moschata grandiflora is a rampant grower, and when established will be covered with bunches of small, white, single flowers, which for fragrance are difficult to surpass. If you have an unsightly shed you would like to convert into a thing of beauty, plant this variety.

Schneezwerg is a hybrid *rugosa* bearing most perfectly shaped semi-double flowers of the purest white, and continues to bloom all through the Summer, a suitable subject for a hedge, whilst Conrad F. Meyer is another fine *rugosa*.

R. rugosa is worth growing if only for the beauty of its hips in the Autumn.

Of the H. Musks introduced by the late Rev. J. H. Pemberton, Pax, Prosperity, Moonlight and Penelope are my favourites. These serve many useful purposes, either to form bold massed beds, hedges, or single large specimen bushes, as they possess the good qualities of continuous blooming and fragrance.

Of the Polyanthas I have a great fancy for Suzanne Turbat, Coral Cluster and Orange King, whilst amongst the newer varieties Golden Salmon should, I think, prove very attractive. Else and Kirsten Poulsen, which grow 2½ to 3 feet high, are in a class by themselves, being both very desirable and worthy additions.

For those of artistic taste, perhaps, nothing in the Rose garden is more attractive than some of our glorious single flowering Hybrid Teas, and here Dainty Bess (so happily named) claims a place. The amount of attention this variety has attracted at recent Shows proves that all Rose lovers do not accept the heavy full bloom as their ideal. I was rather amused at a conversation I heard between two ardent showmen, one of whom was extolling Dainty Bess, the other remarked: "Why, do you mean to say you admit that variety in your garden—do you call it a Rose?" Then we all entered into a spirited defence, the outcome of which was that the majority admitted that it was, perhaps, the most glorified perpetual flowering form of our lovely wild Rose, *R. canina*, the hybridist had so far produced. Of single flowering Hybrid Teas I must mention that fine grower, Isobel, while Irish Elegance, Irish Fireflame, Mrs. Oakley-Fisher, Billy Boy and Cecil are all good.

Of the newer climbers, from what I have seen so far, I think we must welcome Mary Wallace to a place in our garden. This continuous blooming, loose, salmon pink Rose, raised by the late Dr. Van Fleet, has pleased me and has many uses. *Le Rêve* is a very vigorous, semi-climbing Pernetiana introduced by Pernet-Ducher in 1923. It is a very attractive variety, with its sunflower yellow semi-double blooms borne in great profusion, coming early when they are so welcome. Very little pruning is required for this variety.

Of the taller and more stately gems, what a lovely sight Allen Chandler is, with his vivid scarlet single blooms produced both early

and late. It is suitable for growing as a big bush, or pillar. I have a bed of Penelope overtopped by specimens of Allen Chandler, and the effect is very pleasing. Cupid with its buff pink single blooms is attractive, as is also Mermaid, that wonderful Hybrid Bracteata, with large single sulphur yellow flowers 5 to 6 inches across. When the outer petals have fallen, the anthers form almost a flower by themselves, and if the flower is only a joy of one day, you can be quite certain that you will see another in practically the same place to-morrow, so continuous is it. This Rose has lovely glaucous and reddy-brown tinted foliage, and by a wonderful provision of nature its sharp, hook-like thorns seem to say—"Don't touch me, as the young shoots are most brittle, and break off like icicles." Just let it luxuriate undisturbed, except for thinning out the old wood.

Paul's Lemon Pillar is a well-known climber, with blooms of perfect shape.

Two Australian Roses of merit are Queen of Hearts and Sunny South; these are quite away from the Show type of Rose, the blooms being of loose formation—to me a most attractive break. They will form large bushes.

Albertine—a wichuraiana—is perhaps the finest of all the ramblers. Its long 15-foot rods are literally covered with exquisite blooms. Dr. Van Fleet is a lovely flesh pink rambler from America, whilst Alida Lovett is another pink variety. What an advance upon Dorothy Perkins these ramblers are. Continuity of bloom is the great need in this class. These are not all the gems, only just a few that I can with confidence recommend—some of which are not often seen at our Shows, but they should be in every Rosarian's garden. Shot Silk, Betty Uprichard and Etoile de Hollande are planted by the thousand, but let us get a little off the beaten track and plant a few of the lesser known gems and we shall get infinite pleasure in their variations.

HOW TO PACK CUT ROSE BLOOMS.

By Mrs. COURTNEY PAGE, Haywards Heath.

Those of us who live in the country and have beautiful gardens that give such pleasure, inasmuch as they produce quantities of lovely flowers, especially Roses, are only too glad to be able to give others who are compelled by force of circumstances to dwell in towns, an opportunity of sharing our enjoyment.

This we can do by inviting them to come and see our beauties growing, but it sometimes happens that they are not living within visiting distance, so the next best thing we can do is to send them some Roses, and I almost venture to think this gives us the greater pleasure. What is there that gives more delight than to receive a box of flowers, either by post or rail, which is unexpected, especially if the recipient is an invalid ?

It is my intention to help those who wish to give pleasure to others by explaining the best way to cut and pack the Roses, so that they will arrive in as perfect a condition as possible, and for many days enliven the rooms and lives of those to whom they are sent.

The best time to cut the blooms is in the early morning before the sun gets too hot. They must not be full blown, or they will not travel well, but would arrive in a jumbled mass of leaves and petals, neither must they be nearly full. The ideal stage is when the bud is just showing colour, about a quarter open. Cut the blooms with as long a stem as possible, and place them at once in a pail of cold water right up to their necks, and put them in a dark cupboard for about three hours, so that they can absorb as large a quantity of water as possible. I call it "having a long drink." They should be packed and sent off during the afternoon, so that they will arrive at their destination the first thing the following morning.

A long box, either of wood or stout cardboard, should be used for packing the blooms in, and the operation is best carried out as follows :

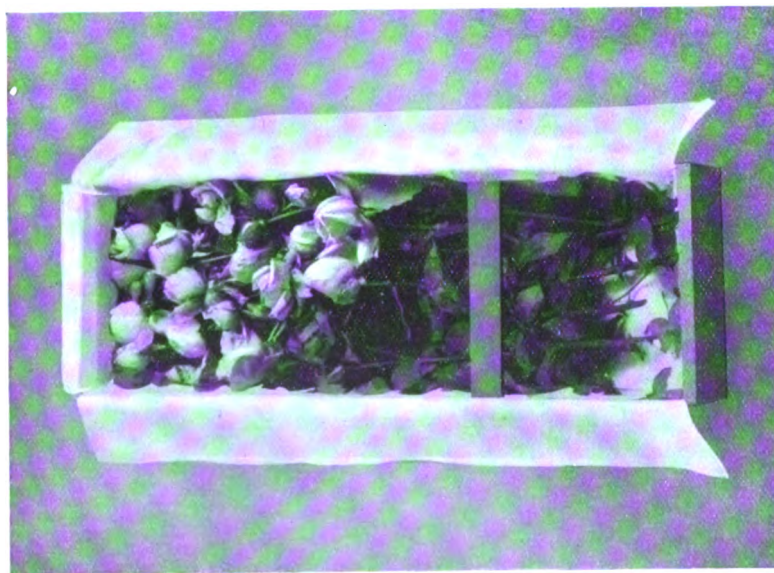
First line the box with tissue paper and allow sufficient so that it can be folded back over the sides. Then take the blooms one by one from the water, and place them in the box side by side, from left to right, the heads of blooms all lying the same way. When you have filled in the first row across the bottom of the box, put another row of blooms just below those already in the box, bloom to bloom, again from left to right, and continue doing so until the box is full. Now take a piece of wood exactly the width of the box and wedge it down across the stems so that the blooms are held in a firm position and so prevent bruising, fold the spare tissue paper over first from the one side of the box, and then from the other, fix the lid, and tie up tightly.

It sometimes happens that a wooden box is not handy, and you have to fall back on a cardboard one. The same procedure may be followed, but instead of using a wooden wedge, make two holes through the bottom of the box and thread a piece of string so as the two ends come uppermost. After filling the box with flowers, the two ends of the string are tied tightly together over the stems of the blooms. This will keep them firmly in position, so that if they are sent by post, or rail, the box may be turned over any way without damaging the blooms inside.

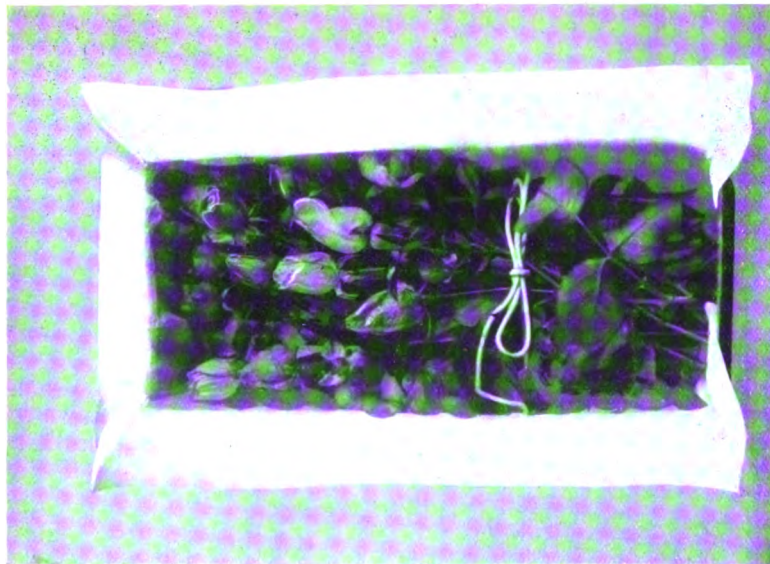
Roses thus packed will travel very long journeys, and one may be sure of them arriving at their destination in the best of condition.

The address should be written on a label and attached to the end of the box, which should then be marked "Fragile," or "Cut Flowers."

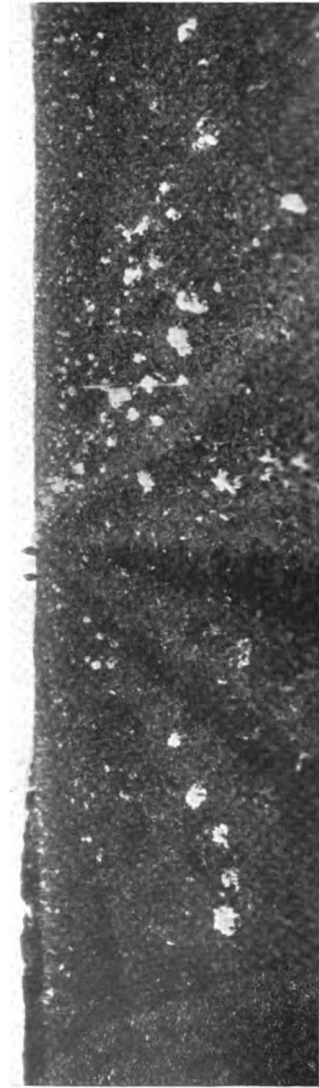
On arrival the Roses should be taken one by one from the box, and again placed up to their necks in cold water, for at least two hours before they are used for arrangement.



ROSES PACKED IN A WOODEN BOX.



ROSES PACKED IN A CARDBOARD BOX.



MR. MCGREDY IN ONE OF HIS ROSE FIELDS.
PART OF ANOTHER FIELD OF 300,000 ROSES.



SOME IMPRESSIONS OF A LATE AUTUMN VISIT TO PORTADOWN.

By NORMAN LAMBERT, Fulford, Yorks.

In the days when there was such a thing as a "Last Rose of Summer" it would have been a futile journey anywhere in mid-October in quest of the "Queen of Flowers." Knowing the capabilities of the modern Rose, I expected to find plenty of good blooms in the fields at Portadown. And I was not disappointed.

The weather, at the time of my visit, was about as unfavourable for outdoor flowers as anything October is capable of serving up. Sometimes we have in Autumn a short period of fine, sunny days known as "St. Luke's Little Summer," when Nature seems to give us a parting glimpse of the glory that has been, and when Roses can be gathered clean and fresh and fragrant. This year we had no such period. It seemed to have rained incessantly in Ireland as only Irish people (and perhaps West of England folk) know how it can rain. Fortunately it remained fine sufficiently long for us to see the majority of the Roses. Last year I saw them in July, about three months earlier, so that I was able to compare the difference in growth. In most cases, where it was an easy matter to pass along the rows and between the plants in July, I now found the growth so strong that trees in adjoining rows sometimes touched, and it was difficult to walk among them. The standards were very fine, and I have never seen their equal.

There is a cause, apart from the climatic conditions prevailing in Ireland, for this exceptional vigour. Taking the popular varieties as types, it is only reasonable to expect them to show and retain their full vigour if they are budded on the right kind of stock and possess a strong and fibrous root system. Give your Rosarian a well-rooted specimen, and he cares little about the top growth, most of which he cuts away at pruning time. When I see people carrying away

bundles of so-called "cheap" Roses from auction sales and the like, with parched roots, or in some cases practically no root system at all, I feel that I would like them to go into those Irish fields at Portadown and pull up any tree at random and see what a well-grown specimen is like. But I am afraid that there are equally foolish buyers of British grown trees. When you can go in mid-October and gather flowers in plenty from trees that are still full of vigour it must needs be some time before those trees are in a sufficiently dormant condition to move. What happens? The old idea that November is the best month for planting Roses seems to have resulted in a demand for an early despatch of trees. Some buyers are so impatient that they demand their trees before November. This clamour for early despatch is not disadvantageous to the Nurseryman—rather the reverse—for it helps him the sooner to clear his land. But the Nurseryman who considers his reputation and the value set upon the ultimate success or otherwise of the trees he sends out looks beyond the mere clearing of his land. He advises his customers to have their orders despatched when the trees are dormant. Late November is the earliest date in a mild season such as this. I could not help thinking, as I passed rows of Golden Emblem, Mabel Morse and others in full vigour, with new growths that needed yet a week or two to ripen, how many would be taken from their Irish home, contrary to the grower's advice, in the feverish haste characteristic of most of the things we do nowadays.

In a large space adjoining one of the Rose fields I saw a big patch of dahlias, all of which had been ruined by frost. Roses exposed to similar conditions were unaffected, and this was further proof of their usefulness out of doors in late Autumn.

I have said that the specimens I saw were really good blooms. The free and continuous flowering character of the modern Rose is not sufficient in itself to make a good late Autumn display. The bloom has to withstand rains, mists, and sometimes frosts—at any rate difficult climatic conditions. When the stoutly built bloom that was so beautiful in the hot sunny days is a discoloured pulpy mass the loosely built Rose opens readily in all kinds of weather. Moreover, the latter is generally free flowering. There are loosely built Decorative Roses that might almost be termed *négligé* in appearance, but some of these have certain characteristics, such as brilliant colouring

or exceptional freedom of blooming, that make them useful garden varieties. Such a Rose is Gwyneth Jones, which for freedom of flowering is unsurpassed. An individual bloom placed near a stately bloom of Ophelia, or Madame Butterfly, might certainly be termed loose, but see Gwyneth Jones in full bloom when massed, and then pass judgment on it. I could not help thinking, as I passed down rows of popular varieties, giving hundreds of blooms, how few of these would have been worth gathering in late Autumn if the modern Rose had been developed on lines different from those that have made it so useful and popular.

There is a wonderful colouring running through the newer Roses that have been raised at Portadown during the last ten years. It is a striking note of brilliancy that makes them conspicuous in the garden and equally attractive as cut blooms. It is the result of careful hybridisation, and the use of startling and novel colours as parents. Many of these vividly coloured parents are seedlings that never pass beyond the limits of the hybridising house and its vicinity. I walked through the house where the birth of the Newer Roses takes place. It is a slow and tedious process, this joining hands with Nature in the production of new varieties. The average gardener knows little of the many disappointments and few successes that are attached to it. Nevertheless, it is a fascinating branch of horticulture, pregnant with possibilities, and one that perhaps even those who have devoted a life-study, nay, even accumulated the experience of two or three generations, in the development of a particular species, feel that they know so little about. I felt, as I left the hybridising house, with its numbers of ripening hips, each holding the seeds of some new variety, many perhaps destined to make our gardens beautiful in the years that are yet to be, and in their turn to become progenitors of future novelties, writing on the door that lovely little fragment of Tennyson's in which he says, as he looks at a tiny rock-plant that he has plucked from a crevice :—

Flower in the crannied wall,
I pluck you out of the crannies.
I hold you here, root and all, in my hand ;
Little flower, if I could but understand
What you are, root and all, and all in all,
I should know what God and man is.

ROSES AT THE SPRING SHOW.

By HERBERT COWLEY, Editor of "Gardening Illustrated."

Polyantha Roses for early use : the Sweetest Scented Rose and the success of Amateur exhibitors.

The Spring Show of the National Rose Society is an event to which we all look forward with great interest. When Spring Roses are here we can say with the poets, "Lo, the winter is past," or as it is so beautifully expressed by Omar Khayyam :

"Indeed, indeed repentance oft before
I swore—but was I sober when I swore?
And then, and then came
Spring, and Rose-in-hand
My thread-bare penitence a-pieces tore."

The Spring Show was held on April 20th, 1928, in the Royal Horticultural Society's old hall; it was one of the brightest events of the year, and it might well have inspired the above appropriate lines. The Show demonstrated the great rise in popularity of the Polyantha Rose, especially the dwarf varieties for early decorative purposes. This was, in fact, one of the notable features of the Exhibition. Among the varieties particularly well represented were Golden Salmon, most outstanding of all; Echo, White Echo, Juliana, La Reine Elizabeth, Coral Cluster, Sunrise, Sunshine, Locarno, Orange King, Ellen Poulsen, Edith Cavell and Ideal. In Mr. Pemberton's group the varieties Kersbergen, dark crimson, and Mikado, dark orange pink, were particularly attractive. Another feature of this Show was the survival of that lovely old Rose, Maréchal Niel. What pleasant memories this old Rose conjures up. There were baskets and boxes of Maréchal Niel, as fine as we have ever seen them. It is still unrivalled as the most glorious of all yellow Roses under glass. The large golden yellow blooms imparted a luminous colour to the far corners of the hall.

Amateur's Roses.—The superiority of the Amateur grown blooms over the trade blooms has been commented upon at previous Spring Shows. On this occasion it was more noticeable than ever, especially in the leading classes. This, no doubt, is due to the great care and individual attention bestowed by Amateurs who tend their own Roses under glass. The Amateur blooms throughout were quite up to the high standard of previous Spring Shows, which is more than can be said for some of the trade growers, who appeared to have experienced difficulty in successfully timing their blooms for the Show. In the principal Amateur classes Mr. E. J. Holland added to his many triumphs by winning three First Prizes, and the Silver Gilt Medal offered for the best bloom in the section. He was heartily congratulated on his winning box of 12 blooms, comprising the following varieties :—

William Shean, Mrs. Charles Lamplough, Mrs. Foley Hobbs (premier bloom), Mrs. Edward Mawley, Capt. Kilbee-Stuart, Mrs. Henry Morse, Mrs. Campbell Hall, Wilhelm Kordes and Mabel Morse. His blooms of Mrs. Foley Hobbs were as fine as we have ever seen them. Mr. G. A. Hammond showed some remarkably fine blooms in the class for a group of cut Roses; he also had exquisite baskets of Mrs. Foley Hobbs and Mrs. Henry Morse. Mr. Oppenheimer's best blooms in the class of Exhibition blooms included J. G. Glassford, Mrs. Foley Hobbs and Capt. Kilbee-Stuart. The premier blooms of the Show were Maréchal Niel, shown by Mr. A. T. Goodwin, and Mrs. Foley Hobbs, shown by Mr. E. J. Holland.

Only one Rose gained the Gold Medal, viz., May Wettern, shown by Messrs. A. Dickson & Sons. It is a silvery shell pink, a highly pointed bloom with reflexed petals reminiscent of Madame Abel Chatenay and Mrs. Henry Morse at their best, but larger than either. The deep pink petals recurved gracefully, showing the pearly colour inside; it is a most shapely flower, and fragrant. Those who have seen this Rose growing speak very highly of it both as an Exhibition and bedding variety. A Certificate of Merit was granted to Chaplin's Pink Climber, which is said to be the result of a cross between American Pillar and Paul's Scarlet Climber. The flowers are larger than those of either parent, and of a beautiful soft shade of pink, with clusters of golden stamens. It has a great future as a Pillar Rose.

The most discussed Rose at the Spring Show was, undoubtedly, Flamingo, a brilliant rosy-red. We will not attempt to further describe the shade beyond stating that it was the most startling colour in the hall, and Flamingo attracted a great deal of attention and comment. It gained the Gold Medal last year, but it was shown in better form on this occasion.

The large circular group by Chaplin Brothers was one of the best things in the Show. Here were weeping standards of Excelsa, White Dorothy, Mrs. W. H. Cutbush, Lady Reading and Ellen Poulsen, rising well above a mass of dwarf Polyantha Roses flowering in great profusion. The group also contained fine blooms of Shot Silk, Hortulanus Budde, Lord Charlemont, Betty Hulton, Golden Ophelia and Sovereign.

Fragrant Roses.—It was noted by more than one observant visitor that the Roses shown on this occasion were more fragrant than usual with forced Roses. Mr. George Prince, of Oxford, showed fine blooms of Etoile de Hollande. It was by far the sweetest scented Rose in the hall. The blooms shown were remarkable also for their very dark colour, so dark that we heard one lady inquiring if this was the Black Rose? Mr. Elisha Hicks was decidedly first in the class for a group of cut Roses shown on the tabling, and in the Nurserymen's class for 24 Exhibition Roses in boxes Messrs. B. R. Cant & Sons gained the first prize. The three most distinctive blooms were Phœbe, Sovereign and Mrs. Beatty.

Decorative Roses.—All of the dinner tables decorated with Roses reached an exceptionally high standard of excellence, but only two varieties of Roses were represented, viz., Roselandia, golden yellow, and the pink Madame Butterfly. The tables were better finished than usual, but one is tempted to ask are these the only Roses available at this season? The tables were all so much alike that to the uninitiated it was impossible to discriminate between them. Most visitors, we feel sure, long for a departure from this uniform standard of arrangement. All the Roses were perfect specimens borne on strong, stiff stems, the stiffness in some instances being relieved by the foliage of R. Willmottiae, Maiden Hair Fern, copper coloured Crotons and finely cut Maple in tones of crimson and gold.



GOLDEN SALMON (Poly.).



THE GREAT SUMMER SHOW.

By J. FRASER, F.L.S., Kew Gardens, Surrey.

The morning of the opening day, June 29th, of the Great Summer Show of the National Rose Society, in the grounds of the Royal Hospital, Chelsea, was bright, and continued so on the following day, being a great contrast to the weather of the previous year. Inside the great tent for the principal display of representative groups of Roses there was also a kaleidoscopic transformation of the arrangements compared with the previous Summer's Show, for the large tables were arranged back to back along the centre of the tent, leaving a broad gangway on either side for visitors to parade and inspect the Roses. In no way did it look like a repetition of the previous year's Show, yet the prospect was pleasing and effective. H.M. The Queen passed leisurely through the Exhibition tents, inspecting the Roses, just before noon. Almost promptly after the opening hour this tent was simply packed with enthusiastic visitors, eager to see the Roses that all may aspire to grow. Unfortunately the wind got very rough during the afternoon, and a dust storm marred the beauty and freshness of the Roses as seen during the earlier part of the day. All the same the Show was another success to the credit of the Society in spite of the very unfavourable weather conditions during May and June. It was also unimpeachable evidence of the skill of the growers, both Nurserymen and Amateurs. Some of the finest Exhibition blooms in the Show were Madame J. Gravereaux, Lady Helen Maglona, Mrs. A. R. Barraclough, Admiration, Mrs. Charles Lamplough, and Florence Forrester.

NURSERYMEN'S CLASSES.

The Championship Trophy for a representative group of cut Roses was carried off by the energetic growers, Messrs. Chaplin Bros., with a charming arrangement of pillars and stands. They had a massive centre of their new rambler, Chaplin's Pink Climber, supported by handsome pillars of Waltham Cross, Betty Uprichard, Mrs. H. Morse, Ellen Terry, Purity, Mrs. Tresham Gilbey, Emma Wright, Paul's Scarlet Climber and others. The De Escofet Memorial Cup for a smaller representative group was secured by Mr. Geo. Prince with an admirable display. He had showy pillars of Allen Chandler, Joanna Bridge, Paul's Scarlet Climber, Dainty Bess and others, including a fine basket. In the smallest class of groups the most effective was that of Messrs. Jarman & Co., who had dainty pillars of Betty Uprichard, Mabel Morse, Shot Silk and Mrs. Henry Morse.

Very attractive baskets of Emily Dodd, Shot Silk, Betty Uprichard, Lady Worthington Evans, etc., placed Messrs. Alex Dickson & Sons in the front rank here. Dowty's Rosery had the best three baskets. The three charming baskets of the Polyantha Roses, Golden Salmon, Locarno and Frank Leddy, all fully expanded, gave Messrs. Wm. Cutbush & Son pride of place. The A. C. Turner Cup for thirty bunches of Roses, to show the habit of growth, was secured by Messrs. A. Warner & Son. Lamia, Hortulanus Budde and Rose Marie were fine bunches.

The cut blooms on boards gave visitors an opportunity of seeing the varieties best suited for the peculiar season, what the varieties can do, and what the skill of the cultivator can accomplish in spite of handicaps. Messrs. Frank Cant & Co. had forty-eight grand blooms of George Dickson, Col. Oswald Fitzgerald, Mrs. Andrew Carnegie, Red Star, Mildred Grant, Lyon Rose, Gladys Holland, Deity, Golden Emblem and others (some of which are not easy to grow), gaining for them the China Trophy. Messrs. B. R. Cant & Sons were a good second. In the class for twenty-four varieties were some grand blooms of Coronation, Snow Queen, Mrs. C. Lamplough, Rev. F. Page-Roberts and Mabel Morse, gaining for Messrs. Jarman & Co. the John Hart Memorial Cup. Tea and Noisette Roses call for special soils, favourable

seasons and skill, and it is interesting to see what can be done with them. The dainty little blooms of the old varieties are too small for competition, but Messrs. Geo. Longley & Sons had grand blooms of the newer and larger Mrs. Foley Hobbs, Maman Cochet, White Cochet, Lady Plymouth, Mrs. M. Kennedy, and Nita Weldon, which gained for them the D'ombrain Cup. For twelve blooms of new Roses distributed since January, 1924, Mrs. Beatty, Lady Worthington Evans, Arthur Cook and Lady Helen Maglona were some of the best, gaining the Kilbee Stuart Memorial Cup for Messrs. B. R. Cant & Sons. The best twelve blooms of any new Rose were R. E. West, shown by Mr. G. Prince. The best basket of any new Rose put into commerce since January, 1922, was Maud Cuming, gaining the Brayfort Challenge Cup for Mr. John Mattock in excellent competition.

The tent for the artistic classes is always interesting on account of the very numerous dinner-table and other decorations. For the best dinner-table, Mrs. L. R. May was at her best, using Madame Butterfly and the foliage of R. Omeiensis pteracantha. Mrs. C. A. Tisdall took the first place for a bowl of Roses, using Roselandia, and was equally successful with a basket of Roses, using Madame Butterfly. The best new Rose of British or American origin, between 1921 and 1926 was Lady Roundway, gaining the Nickerson Prize for Messrs. B. R. Cant & Sons.

The new Roses were many, but only eight secured appropriate awards. There is still the enthusiastic curiosity to see the new creations of the skilled raisers, and to discuss the colours and promise of the infants. The custom is very old in the history of humanity, as is evidenced by Moore's version of Anacreon :

" Then, then, in strange eventful hour,
The earth produced an infant flower,

* * * *

The gods beheld this brilliant birth,
And hailed the Rose, the boon of earth."

Chaplin's Pink Climber, Daily Sketch, and Waltham Cross are fine additions to the decorative Roses, while Swansdown, Edith Nellie Perkins, Advocate, Souvenir of the old Rose Gardens and James Rea give promise of being useful for a variety of purposes. The three latter are often quite massive blooms and are most likely to be grown for the Exhibition board.

AMATEUR CLASSES.

Except in the matter of bulk, there was plenty of evidence that Amateurs can grow as good, and sometimes better, Roses than the Nurserymen, and merely numbers of plants from which to select would enable them to be serious rivals in an open class for Exhibition blooms. The representative groups showed an improvement in arrangement compared with that of last year.

In the larger of the two representative groups of Roses Mr. J. N. Hart, of Potters Bar, had fine masses of Norman Lambert, Lemon Pillar, Paul's Scarlet Climber, Shot Silk, and J. B. Clark, and he was accorded The Champion Trophy. The best group in the smaller class consisted of five pillars and a basket, neatly and attractively arranged, with a foreground of smaller bunches, and this gained The Cecil Cant Challenge Cup for Mr. G. Marriott, Carlton, Notts. He also had the best two baskets of Roses, showing Lady Pirrie and Golden Emblem. Mr. W. E. Moore, Ickenham, was equally successful with a basket of massive blooms of White Maman Cochet, and Dr. W. P. Panckridge, Petersfield, was the leader in another class for a basket. The handsome blooms of Mrs. H. Bowles, grown within five miles of Charing Cross, gained the leading award for Mr. A. Norman Rogers, Putney. Dr. W. P. Panckridge had the best Roses grown and staged by the exhibitor. For growers of less than 500 Roses of various types, Mr. L. Roberts had grand blooms of Dame Edith Helen, Lady Inchiquin, Mrs. H. Morse and Mrs. H. Bowles. Mr. R. H. Hall, Goodmayes, staged the best twelve blooms in a basket.

Roses in vases were also well shown, and twelve varieties, including Miss May Marriott, Lamia, and Sovereign, gained the Mattock Cup for Mr. G. Marriott. The Holroyd Cup was carried off by Mr. A. L. F.

Cook, Hayes, with charming blooms of Emma Wright, Lemon Pillar, &c. For six varieties in another class, Mrs. Harold Cribb had the best, with very highly-coloured Madame E. Herriot, &c. The varieties, Mrs. Oakley-Fisher, Purity, K. of K., grown within ten miles of Charing Cross, gained first place for Mr. J. N. Stuart, Harrow. For six varieties, grown and shown without any assistance, Mrs. E. E. Pulford, Horley, and Mrs. Dorothy Walker, Northwood Vicarage, were leaders in two classes.

For Exhibition Roses in boxes and baskets, twenty-four varieties gained The Edward Mawley Challenge Cup for Dr R C Turnbull, Colchester. He had splendid blooms of Nellie Parker, Florence Forrester, Bessie Brown, Mildred Grant, Lord Allenby, &c. Mr. F. H. Fieldgate, Colchester, was equally successful with two baskets. The Lamplough Challenge Cup was secured by the Rev F. R. Burnside, Gt. Stambidge Rectory, with magnificent blooms of Mrs. J. H. Weleh, Mrs. Chas. Lamplough, Rev. F. Page-Roberts, &c. The Tea and Noisette Trophy brought splendid blooms of Lady Plymouth, White Maman Cochet, and Madame J. Gravereaux from Mr. W. E. Moore, Ickenham, gaining for him first place. Dr. W. P. Panckridge secured The Prince Memorial Prize; Dr. G. E. Deacon, Norwich, The Charles Rigg Cup, and Dr. W. P. Panckridge The Ben Cant Memorial Prize. Mr. W. E. Moore, who grows his own Roses, won The Nicholson Challenge Cup for twenty-four blooms, many of them being superb. Very large blooms were staged by Dr. W. P. Panckridge, who had the best twelve. In the same group Mr. O. E. J. Coote carried off The Samuel McGredy Memorial Cup for six blooms. Mr. J. Stuart was the winner of The Williamson Challenge Cup in the Metropolitan Classes. For Roses grown within five miles of Charing Cross Mr. A. N. Rogers gained The Gardeners' Company Challenge Cup, and Mr. F. Metcalf had a first in the same radius.

LADIES' ARTISTIC CLASSES.

Ten classes were devoted to dinner-table decorations, baskets and bowls of Roses, in addition to those in the Nurserymen's classes, and these made a charming display in a large tent. Apart from the favourite varieties for these arrangements, there was considerable variety in detail, because every exhibitor had to exercise her own skill and taste

without external aid. In the class devoted to Single Roses, Mrs. Courtney Page, Haywards Heath, had the most tasteful arrangement, using Dainty Bess, with the strangely-contrasting ferruginous foliage of *Rosa rubrifolia*. Irish Fireflame, Irish Elegance and the orange Mrs. Oakley-Fisher were other Single Roses used in this well-contested class, in which equal fourth prizes were awarded.

Competition was equally strong in the class for table decoration, where Single Roses were inadmissible, and here the lead was taken by Mrs. Oakley-Fisher, Sudbury, Middlesex. Mrs. Courtney Page was a good second, using foliage of *Rosa Omeiensis pteracantha* for a foil. At least three of the five winners used *Roselandia* on their tables, and the contestants all displayed considerable skill. In the class for lady Amateurs who grow their own Roses, Mrs. Courtney Page was unbeatable with the charming colours of Emma Wright and Angèle Pernet, both in bud and expanded. She was followed by Mrs. Oakley-Fisher, who used Emma Wright and Irish Fireflame. For lady Amateurs who had never won a first prize in the Decorative Section, Mrs. E. J. Cooper, Warlingham, displayed considerable ability, using Madame Butterfly. In the lady Amateur's novice classes Miss E. Robins was successful, using Emma Wright on her table.

The best basket of cut Roses was Madame Butterfly, &c., arranged by Mrs. Courtney Page, who was also successful with a bowl of mixed Roses. Mrs. M. Hancock, St. Albans, arranged the best vase, and Mrs. E. J. Cooper the best bowl in another class, both showing Madame Butterfly. Miss J. Preston-Hillary was the winner for a bowl in the novice classes.



PORTADOWN IVORY (H.T.).
GOLD MEDAL awarded to
Messrs. SAMUEL MCGREDY & SON, Portadown.

McGREDY'S IVORY.

(H.T.)

Raised by Messrs. SAMUEL McGREDY & SON, Portadown, N. Ireland.

A large, well-shaped bloom, with stiff petals of good, lasting quality. The colour is creamy white, with a light yellow base. Free and perpetual flowering. The foliage is a dark olive green, fairly free of mildew. Fragrant. Of a vigorous constitution, it should prove a very valuable Rose for bedding purposes.

THE PROVINCIAL SHOW.

By A SOUTHERNER.

The Provincial Show was held at Saltaire, on July 11th and 12th, in perfect weather, and was of especial interest, it being the twenty-first birthday of the Saltaire and District Rose Society.

It was the Society's third visit, and the Saltaire officials spared no pains to make the Show the success it was, but owing to the trade depression that existed, the attendance was not up to the usual number. This was to be regretted, as the Show was the best held in the North of England for some years.

As usual, the Trade Groups made a fine display, but the Amateurs were not to be denied, and the exhibits staged by Mr. Marriott, of Nottingham, came in for much admiration and praise.

In the Nurserymen's Section the large Group Class was won by Messrs. S. McGredy & Son, of Portadown, with an excellent display, which included many new varieties, notably Mrs. A. R. Barraclough, Margaret McGredy and Rose Berkeley. Messrs. A. Dickson & Sons, of Newtownards, were second with a pretty display.

In the small Group Class, Mr. George Prince, of Oxford, staged a delightful lot, his Mabel Morse, Mrs. A. R. Barraclough and Else Poulsen being charming. Messrs. Bees, Ltd., were a close second, and Mr. W. E. B. Archer and Daughter a good third, with excellent examples of Dainty Bess, Joyous Cavalier and others.

In the class for Roses in baskets, The Donard Nursery Co. were first, with fine examples of Mrs. Henry Morse and Mabel Morse ; Messrs. Bees, Ltd., were second ; and Mr. John Mattock, of Oxford, third.

For 24 bunches of cut Roses, Mr. John Mattock was well ahead of all comers, and included in his stand fine examples of that old variety Rosa Mundi.

For 36 Exhibition blooms, The Donard Nursery Co. were first, with a box of magnificent blooms, Mrs. Charles Lamplough, Edel, Mabel Morse and Admiration being marvels for size.

For 24 Exhibition blooms, Mr. George Prince led, with fine examples of Mabel Morse, Mrs. Foley Hobbs and Mrs. Charles Lamplough. Mr. John Mattock, of Oxford, was a close second ; and Mr. George Burch, of Peterborough, third.

For 12 blooms of New Roses, The Donard Nursery Co. were an easy first.

In the class for Exhibition Roses in baskets, The Donard Nursery Co. were first, with magnificent blooms of Mrs. Charles Lamplough ; Mr. John Mattock, second ; and Mr. George Burch, third.

For a basket of Roses not yet in Commerce, Mr. George Prince was first, with Elizabeth Arden, a charming pure white variety of good form. Messrs. Bees, Ltd., were second, with J. C. Thornton, a lovely red variety which unfortunately lacks perfume.

In the class for a Dinner Table Decoration, Mrs. Slinger, of Newcastle, Co. Down, was an easy first, with a very pretty exhibit ; Mr. Drew, of Longworth, second ; and Mr. J. E. Smith, third.

Mr. John Mattock was first for a Bowl of Cut Roses, and Mr. J. E. Smith for a Vase of Cut Roses.

The Amateurs' Section.

The Jubilee Challenge Trophy was won by Mr. George Marriott, of Carlton, Nottingham, with a wonderful group which was rightly judged to be the most meritorious exhibit in the Show. He had baskets of his new Rose—Perfume—Else Poulsen, Queen Alexandra Rose and

Shot Silk that were simply perfection, and reflected the greatest credit on him. Mr. George Marriott was first for two baskets of Cut Roses ; Mrs. Armitage, of Knutsford, second.

In the class for One Basket of Cut Roses, Mr. Gulliver Speight, of Market Harborough, was first ; and Mr. F. A. George, of Worcester, second.

For the best 24 Exhibition Roses in Boxes, Mr. Gulliver Speight and Mr. W. Sunderland, of Driffield, tied for first place. The Judges took some time to try and separate these two exhibits, but they were so close that, although the exhibits were pointed up twice, they came out equal. Mr. Sunderland had the best bloom in the Amateurs' Section in his box, a lovely bloom of " W. R. Smith." Mr. Sunderland was first for 12 Exhibition Roses.

Mrs. Armitage won in good form the class for those who grow less than 500 plants. Mr. J. J. Ingold was first for a box of six blooms ; and Mrs. Armitage, second.

In the class for those who have never won a first prize, Mr. W. K. Plunkett, of Shipley, was an easy first.

The class for those who grow and stage their own Roses was won by Mr. Gulliver Speight, with Mr. Sunderland second ; while for 12 blooms Mr. Ingold was first.

Mr. Ingold was first in the class for growers of less than 250 plants ; and Mr. F. A. George second. Mr. F. A. George was first in the class for those who grow less than 100 ; and Mr. S. Hardaker second.

In the Ladies' Artistic Section the competition was very keen, and the class for the best Table Decoration went to Mrs. Courtney Page for a lovely exhibit of Emma Wright, daintily arranged with R. Willmottia and Swegingowii foliage. Miss Newsham was second ; and Mrs. E. W. Swift a good third. Mrs. Courtney Page was first for a bowl of cut Roses ; and Miss Newsham second. Miss Newsham was first for a vase of Cut Roses ; Mrs. Courtney Page, second ; and Mrs. G. Nicholson, third.



ELIZABETH ARDEN (H.T.).
CERTIFICATE OF MERIT awarded to
Mr. GEORGE PRINCE, Oxford.



ELIZABETH ARDEN.
(H.P.)

Raised by GEORGE PRINCE, Oxford.

This is one of the late Mr. George Prince's seedlings, of which he had a very high opinion. The colour is almost pure white. The blooms are a good shape, and produced on long stems. The petals are stiff, and do not appear to be liable to damage by rain. Fragrant. The habit of growth is vigorous and free, reminding one of Ophelia, from which it is probably a seedling.

THE SPECIAL SHOW OF NEW ROSES.

THE HORTICULTURAL HALL, WESTMINSTER,
JULY 24th, 1928.

By GEORGE M. TAYLOR, Edinburgh.

The name of this Summer Show is justified, because it was certainly notable for the number of Roses entered in the Seedling Class. There was a very large entry, and the sorts put forward varied very considerably. I was struck with the mediocre quality of many of the seedlings, and I wondered what the idea of some raisers was as to what constitutes a good and distinct new Rose. I was somewhat hard in my notes upon some of the new Roses, and in reading them over on the night of the Show, I thought I had, perhaps, been too critical, but on reading the report of the Show in the leading horticultural journal, I found that my opinions were very decidedly confirmed. It is good to know, however, that the Trial Garden of the Society is now established, and that a goodly collection of new sorts will be seen there this season growing alongside older sorts which some raisers have sent in. These older sorts are said to have been displaced by the seedlings, and the raisers in sending their novelties have declared which old sort has been superseded. At least some raisers have done so. This is as it should be, and we hope to see some advances made.

It was unfortunate that the day upon which this Show of New Roses took place was so very hot. It reminded me of the extraordinary experience we had at Leeds when the Provincial Show was last held there. On this occasion in London the heat was bad for the Roses, and early in the day many of them had wilted, and no fair idea of the merits of some of them could be formed. The Horticultural Hall was like an oven.

It was so bad that it drove Mr. Samuel McGredy out to look for an ice-cream to cool his heated brow, but his quest was hopeless.

Two Gold Medals and six certificates were awarded by the judges. Lord Rossmore and McGredy's Ivory were the two selected for the premier award. The former was raised by the veteran Dr. Campbell Hall, of Monaghan, and he was there in person staging his flowers. This is a very large flower ; it is extremely full, and is globular in shape, and slightly pointed. The colour is a clear cream flushed with rose at the points of the petals. It is a striking variety, and I imagine will be a very useful one for competition. As the name implies, McGredy's Ivory was from Messrs. S. McGredy & Son, of Portadown. This is another very big Rose. The colour is a clear ivory—one might almost call it cream—and the petals are shell-shaped. The form of the flowers was good, and they have a faint perfume. If one judges from the maiden plants of each sort that were exhibited along with the flowers, it may be said that both are vigorous growers.

Certificates of Merit were awarded to two Polyantha Roses shown by The Burbage Nurseries, Hinckley, Leicestershire. The first, Baby Betty, is rather a curiosity in the way of colouring. It is yellow with a vivid tint in the buds which changes to rose with age. It was certainly distinct. The second, Britannia, is simply a dwarf Hiawatha. It may be an acquisition, but I have found that there is but little demand for singles of this description. Messrs. Bees, Ltd., Chester, were awarded Certificates for Dr. Hawkesworth and George Howarth. Dr. Hawkesworth is a flower of medium size, but it has good form and a fine perfume. The colour is a rich crimson. George Howarth is a Rose of an arresting colour. It may be described as a deep cherry red. The flowers are of medium size, like those of Dr. Hawkesworth, but they are very shapely, and the glowing colour should make it a favourite for bedding.

Messrs. S. McGredy & Son gained a Certificate for Mrs. Samuel McGredy. I think this Rose will be seen to better advantage on another occasion, and it may be shown well this season. The flowers are not large, but the colour is a blend of apricot, yellow and scarlet. It is a brilliant mixture, and may be regarded as a most promising novelty. Mr. James Simpson, Abercorn, West Lothian, was awarded a Certificate for his seedling named Violet Simpson. This was one of the

best of the new Roses. Mr. Simpson has been a long time amongst Roses—he was described as an Amateur in all the reports of the Show, but that is not so—and this is the first time he has shown a seedling. The colour is a bright cerise with yellow base—the flower is somewhat reminiscent of Gorgeous at its best—and the form is very good. Mr. Simpson has now retired from Rose growing in a professional capacity, and the stock of this variety was secured jointly by an English and also an American firm. I went to Mr. Simpson's garden with the American grower to see this Rose growing, and I was very pleased with it. I think more will be heard of it, and it may yet gain the Gold Medal.

As there were no more awards, I need not write about any of the other seedling varieties, but some of them were obviously out of condition owing to the heat. Although several were not worthy of a place in any Show, there were one or two that will most certainly be seen again, and, I feel sure, under better conditions, that they will give a good account of themselves. It is quite possible that some of them will be heard of in the Trial Garden during the coming Summer.

In the competitive classes chief interest centered in the large groups. The most important class was for a group of Cut Roses, 10 feet by 4 feet. Premier place was taken by The Stanway Rose Gardens, Colchester, and this award seemed to cause some comment amongst rosarians in the Show. I heard the judges being severely criticised. I pay little attention to that kind of thing, however, as I have had a good deal of it myself one way and another over a long period of years as a judge. A judge, amongst other things, is bound by the schedule, and his award may occasion some wonder if the conditions under which the prize is awarded are not in evidence at the same time. The conditions for this group, according to the schedule, were :—"The representative character of the group will be a consideration with the judges." There may have been better flowers, and they may have been likewise, better staged on the second prize group, but the lot that received first place was decidedly the most representative. I was once very angry myself at one of these Shows when I was beaten by a group that I thought was far inferior to the one for which I was responsible. It was the genial Mr. Edward Mawley who pointed out to me that the first group, although inferior

in quality, was by far the more representative. The judges, under the schedule, had no option. The same thing happened on this occasion. Freshness, too, is another point in the schedule, and the first prize lot was certainly in fine condition in this respect. Pillars of Mermaid and Excelsa were prominent on the back of the stand, and Mrs. Henry Morse, Chas. P. Kilham and the pretty pink Gwynne Carr were well represented. The second place was taken by a very fine lot staged by Messrs. Alexander Dickson & Sons, Ltd., Newtownards. There is no doubt about the fact that this was a splendid exhibit, and it was beautifully staged. Its only fault—so far as the schedule is concerned—was that it was not representative. It was practically all Hybrid Teas. It was none the worse for that, and on merit alone it was certainly the best stand, but, unfortunately, the word representative was the stumbling block to success. The pillars of Betty Uprichard and Golden Emblem on this exhibit were very fine. Lady Inchiquin was in superb colour, and there was a most attractive basket of their new Rose Edith Nellie Perkins. I think that variety will be one of the outstanding Roses during the coming season, and I venture to think it will become quite as popular as their Betty Uprichard and Shot Silk. It has been described elsewhere in this *Annual*, and I need not dilate on it here. Mr. Pemberton was third with a very pretty lot, and I noticed a nice batch of the single Dainty Bess. Mr. Hicks was fourth with a characteristic exhibit, and here, again, there was a fine lot of Dainty Bess. In addition to Hybrid Teas and Ramblers, he had a nice lot of his Hybrid Musk Roses. In Messrs. Chaplin Bros.' exhibit I saw a nice batch of the deep red William Bowyer. Mr. Chaplin showed me this Rose growing in his nursery, and it struck me as a very fine deep crimson Hybrid Tea. It is certainly worthy of a trial.

Notice must be taken of the exhibit by Mr. Archer and Daughter of their Dainty Bess and The *Daily Mail* Scented Rose. Both were in good form. I sincerely hope that during this year the weather will not be quite so hot on the Show day and the days preceding it. It was an awful business to travel a distance with flowers, and no matter how carefully they were tended they were out of condition on arrival.

THE AUTUMN SHOW.

By A VISITOR.

The great Autumn Show on September 7th, 1928, and the following day, in the Royal Horticultural Hall, was worthy of its name, for the second half of Summer had been kindly to Roses, the result being a display that will not soon be forgotten. The exhibits by Nurserymen surrounded three sides of the Hall, and formed the highly ornate framework to the picture as one entered the building. There were eighteen entrants in the two leading classes for representative groups of Roses, and the thousands of blooms massed there were sufficient in themselves to make a good Exhibition, if some of them had been selected for the baskets, vases and artistic classes, the latter being always a most interesting feature of the National Rose Society's Exhibitions.

A crowd of people directed me to the first prize group in the large class put up by Messrs. McGredy & Son. This was surrounded by pillars on three sides, with a second row at the back and three fancy baskets in the centre. Thanks to good eyesight I could see the Roses over the heads of the people, and the stands of Margaret McGredy, Mrs. A. R. Barraclough, Betty Uprichard, Los Angeles, Gwynneth Jones, Admiration, and Golden Emblem were just exquisite, the first-named seeming all afire in its vermillion shades. Mr. C. Gregory came second, with twelve pillars in his group, all admirable. Messrs. John Waterer, Sons & Crisp, Ltd., and the Stanway Rose Gardens followed in this order. The remaining entries were so good that five of them were highly commended or commended, and they could not think it was very bad losing in such good company. They were Messrs. B. R. Cant & Sons, Frank Cant & Co., Dowty's Rosery, D. Prior & Son, and Mr. J. H. Pemberton.

In the smaller representative class Messrs. Harkness & Co. led off for quality, their group being also neatly arranged, even if somewhat solidly. They certainly had fine stands of Golden Ophelia, Christine, Mrs. H. Morse, Betty Uprichard, and Independence Day. With eight tall pillars and a basket in the centre, Mr. George Lilley was a good second, the basket being filled with Shot Silk. The above were followed by Messrs. A. J. and C. Allen, and Mr. D. Long in this order. Messrs. Laxton Bros., H. Morse & Sons, E. B. Le Grice, and the Crastock Roseries were commended, and Mr. Henry Drew highly commended. All this testified to quality.

The class for four baskets of Roses was well contested, and the fine blooms of Betty Uprichard, Col. O. Fitzgerald, Shot Silk, and W. F. Dreer brought Mr. William Ferguson out on the top. Messrs. Wheatcroft Bros and Frank Cant & Co. followed in this order with fine baskets. In the class for Polyantha Roses Messrs. D. Prior & Son took first place with Else Poulsen, Kirsten Poulsen and Greta Poulsen. Mr. John Mattock staged the best twenty-four bunches of Roses.

An inspection of the Exhibition boxes showed that fine blooms can still be produced, Messrs. Thos Smith & Sons had magnificent specimens of Frau K. Druschki (Silver-Gilt Medal for the best Rose by a Nurseryman), Candeur Lyonnaise, Lady Inchiquin, Margaret McGredy, Red Star, and Mrs. A. R. Barraclough in his stand of twenty-four. They were followed by Mr. William Ferguson, with such difficult Roses as J. G. Glassford, H. V. Machin, Coronation, George Dickson, etc., in fine colour, due, I suppose, to the cool, moist atmosphere of the North. Very good blooms were shown by Mr. Henry Drew in the class for eighteen, and he was followed by Mr. D. Long as a good second. These exhibitors were again victorious for two baskets of Exhibition blooms that were notable for size and high colour.

The new Roses will be dealt with elsewhere, but I was much taken with the beauty of form and colour, as well as the sweet scent of Portadown Fragrance, shown by Messrs. McGredy and Son, and which everyone who clamours for scent should want. Mrs. G. A. van Rossem and J. C. Thornton promise to be excellent garden Roses, while Chaplin's Pink Climber should oust Dorothy Perkins, now as much overdone as Crimson Rambler was in its day.

AMATEUR SECTION.

When one has finished with the Nurserymen's exhibits it is not sufficient to imagine that the Show has been seen, for it is clear that Amateurs can grow Roses, and if supported by numbers of plants some of them might wish to compete in bigger classes. The basket of cut Roses of Madame Butterfly shown by Mr. H. F. Spicer, Hitchin, was very fine, just beating a basket of K. of K. by Mr. Geo. Marriott, Carlton. For Roses grown within ten miles of Charing Cross, Mrs. Oakley-Fisher, Wembley, put up a beautiful basket of Ophelia, while Mr. R. H. Hall, Goodmayes, came second. For those who without assistance grow and stage their own Roses, Mr. Eric Holroyd showed a splendid basket of Roses, and in another class Mr. S. E. Tattershall was equally successful in taking first place with such varieties as Geo. Dickson and Lady Plymouth.

For six varieties of Roses in vases, with three or more stems each, Mr. G. Marriott was the winner with very fine blooms. In the classes for those who grow and stage their own Roses Mr. W. G. Cox took the first place for six varieties in excellent form. Mr. S. E. Tattershall took the lead in another class for single flowering varieties.

The Exhibition Roses in boxes brought out the skill of the cultivator, and here Mr. Gulliver Speight, Market Harborough, staged large and handsome blooms of Florence Forrester, John Russell, Coronation and Lemon Queen. Mr. H. F. Spicer was second, and Mr. H. Mitchell third, he having Molly Bligh in his box, the best bloom staged by an Amateur. Mr. Robert White had the best six blooms. Mr. Gulliver Speight and Mr. E. H. Pleasance took first prizes in classes for blooms grown and staged by the exhibitor. Mr. A. Norman Rogers and Mr. L. C. Chalmers-Hunt took leading prizes for Roses grown within seven miles of Charing Cross.

LADIES' ARTISTIC CLASSES.

It is always a delight to examine and compare the Dinner-table decorations at these Shows, and though I can never aspire to imitate or hope to excel them, I can recognise the beautiful decorations, "which the neat-handed Phyllis dresses." In the Nurserymen's section the



Lemon Queen,
H. V. Machin,
Coronation.

George Dickson,
Mrs. R. D. McClure,
Horace Vernet.

Florence Forrester,
Augustus Hartmann,
Mrs. John Laing.

John Russell,
Marjorie Bulkeley,
Gloire de Chédane
Guinoisseau.

AN AMATEUR'S FIRST PRIZE BOX. Autumn Show.



best table was arranged by Mrs. C. A. Tisdall, whose choice was Madame Butterfly, interlaced with sprays of R. Willmottiae. Mrs. A. F. Chaplin came second with Roselandia, mixed with the dark foliage of a European Rose, while Mrs. L. R. May was third. The last-named had the best bowl of Roses, followed by Mrs. A. F. Chaplin and Mrs. C. A. Tisdall.

There was greater competition in the Amateur classes, and a considerable amount of floor space was taken by the eight tables. Mrs. Courtney Page, Haywards Heath, selected Roselandia for her table, with foliage of R. Willmottiae and R. Swegingowni, and her work seemed uniformly perfect, when looked at from any direction, if such a thing were possible. Mrs. Oakley-Fisher used the same variety of Rose and foliage, but lacking some points came second. Mrs. E. J. Cooper, Warlingham, was a good third, using Madame Butterfly; Miss Newsham was fourth; Miss M. Woolven was highly commended, and Mrs. Charlton, Yiewsley, Mrs. A. D. Ruff, Sharnbrook, and Mrs. O. Swift, Halifax, were commended. All this speaks highly of the work done, and much patience must have been exercised to make the hand carry it out as the eye could see it. Mrs. Courtney Page was again unbeatable for a Vase of Roses with gracefully arranged Madame Butterfly. Mrs. Oakley-Fisher was her nearest rival, using Roselandia. Mrs. Charlton had the best bowl of Roses, using single Roses, and Mrs. Courtney Page was second with double Roses. There was strong competition in all these classes.

THE FRAGRANCE OF ROSES.

By GEORGE BURCH, Peterborough.

Fragrance, that delightful, subtle, elusive charm that has the power to awaken fond memories of the past—memories of friends we have known and loved, places and experiences that long lay forgotten, as we enjoy the perfume of sweet, fragrant flowers and live again in the days of long ago.

When a boy I used to visit a house, the approach to which was bounded by a wall on which were growing a number of the old common China Roses, with the tiny Dwarf Rose Lawrenciana planted between them. I well remember lingering to carefully touch their soft petals and enjoy the fresh and sweet fragrance of their lovely flowers.

Then as the years went by one became acquainted with Roses still more beautiful, first with the old Hybrid Perpetual varieties, such as Marie Baumann, Xavier Olibo, Alfred Colomb and the like, and then the delicate and refined Tea-Scented Roses.

Much has been said and written lately about flowers losing their fragrance, Roses included, but scentless Roses came in long ago with the Hybrid Perpetual, Baroness Rothschild, followed by the white sports of that variety, viz. :—Mabel Morrison and Merveille de Lyon, later by Her Majesty and Frau Karl Druschki, and others.

We have really more sweetly-scented Roses now than there has ever been, but we cannot fail to recognise that many new Roses introduced in recent years do lack this quality. In some instances they are

otherwise very fine Roses, such as Frau Karl Druschki and Caroline Testout, the last-named variety being just the beautiful pink colour where we should expect to find fragrance, but, alas ! it is absent, and therefore of less esteem, so that it comes to be a matter of choice what Roses we plant in our gardens, the varieties that have fragrance, or those that do not possess this delightful adjunct, but are beautifully shaped blooms.

On thinking over the various degrees of fragrance, one finds there are a certain number of varieties of Roses that are especially rich, that may be classed under a distinctive or particular type of perfume, and so have a relationship to each other.

Thus varieties having the perfume of the Old Damask Rose with slight variation, including Hoozier Beauty, H.T., Château de Clos Vougeot, H.T., Lady Helen Maglona, H.T., General McArthur, H.T., Hugh Dickson, H.P., Général Jacqueminot, H.P., Henry Nevard, H.P. Their prevailing colour is crimson.

Pink varieties with the perfume of the Old Provence or Cabbage Rose : Conrad F. Meyer, Mrs. George Norwood, Mrs. John Laing, Dame Edith Helen, Captain Harvey-Cant, Edgar M. Burnett and Common Moss.

Cream to yellow varieties with perfume of the Musk Rose : Moonlight, Danæ, Felicia, Aimée Vibert, Pax, &c.

Orange and darker shaded varieties that have a fruity perfume with a leaning towards the Sweet Briar : Juliet, Mrs. Wemyss Quin, Lord Lambourne and Mabel Lynas.

Lemon to pale yellow varieties that have a perfume suggestive of a blend between the Tea Scented varieties and Musk : Mabel Drew, Clarice Goodacre, Mrs. H. R. Darlington, Mrs. Beatty and Lady Greenall.

Carmine varieties that possess a blend of the perfume of the Damask and Cabbage Rose : Laurent Carle, Mrs. A. E. Coxhead, Dr. O'Donel Browne, Una Wallace, &c.

Only a few of the wichuraiana and Climbing Polyantha Roses have perfume, among which are : Yvonne, Goldfinch, Dr. van Fleet, Léontine Gervais, Braiswick Fairy and Evangeline.

The Dwarf Polyantha varieties contain only a few varieties with Tea perfume; these include : Eugénie Lamesch, Léonie Lamesch, and Maud E. Gladstone.

The most fragrant Tea Scented Roses include the following : Nita Weldon, Lady Roberts, Anna Olivier, Catherine Mermet, Lady Plymouth and Madame Bravy.

A few varieties of surpassing richness of perfume stand in a class by themselves, such as : the Hybrid Sweet Briars, La France and its sport, Augustine Guinnoiseau, Maréchal Niel and Lady Hillingdon.

It is not generally known that some varieties of Roses have foliage that is also fragrant, and I will name but two or three : the foliage of Juliet has a very strong fruity perfume ; that of the old H.P. Mme. Clemence Joigneaux, when bruised between finger and thumb, yields a strong perfume like Rosemary.

If young shoots of some of the Tea-Scented Roses growing under glass, especially Niphetos and Devoniensis, are lightly sprayed with warm water when the sun is shining, they will give off a delicate and delightful perfume.

ROSE GROWING IN LONDON.

By **NORMAN ROGERS**, Vice-President, Putney.

This paper is not written with the idea of attempting to teach those who are already expert, but for Amateurs who are beginners to whom possibly a little advice may be useful.

Roses can be grown in any garden that is open and not overrun by roots of trees. Before attaining any measure of success the grower must have some patience, and in this sense should experiment in order to find out which varieties do well in his particular district, and strictly adhere to them.

At the different Shows that I have attended I have noticed would-be Amateurs looking at the various blooms in exhibition boxes and noting names with the idea of ordering those particular varieties, fully expecting to get similar blooms in their own gardens. As many of these blooms have probably been cut from maiden plants (those that have never bloomed before), and quite a percentage of exhibition Roses only bloom satisfactorily as maidens, it is for this reason one has to be careful in making a selection. For the benefit of the uninitiated I must explain that a maiden plant is one which was budded during the previous Summer.

Rosarians living within the county of London must be more or less handicapped by want of space to do any extensive budding, and they are obliged to buy their plants from the Nurserymen.

The first thing to do is to ascertain which sorts do best as cutbacks—and this can easily be found out by joining the National Rose Society—and then place your order. Plants should arrive some time during November, as this is the best month for planting. The ground should be prepared at least one month beforehand, by being dug two feet deep and, if possible, incorporating some cow manure with the lower spit. If this is unobtainable Wakeley's Hop manure is a good substitute. Newly planted Roses will not require manure the first year, but their roots will be attracted by the moisture below, and probably reach it during the second year.

Two very important things must be watched at the time of planting. The first is to see that when planting the roots are well spread out and none are allowed to cross. The Roses should be planted very firmly. It is a very good plan, as each Rose is planted, to tread as firmly as possible, and after a period of two or three weeks, when the ground has had time to settle, to tread again.

My advice as regards planting is to keep the varieties together as much as possible. That is to say, if one has several beds, to have each one filled with a particular variety, or if the beds are too big, then have the reds or the whites together, and so on. I always think that the garden can be made to look very much more effective in this way, than having the colours intermixed.

As regards pruning, the National Rose Society issue a book with instructions, which is a very great help, and gives the period when practically every variety of Rose should be pruned.

When I have many plants of one particular variety I divide the pruning into four periods, beginning the second week in March and finishing the second week in April, one-fourth of the number of plants each week, so that the blooms do not all come on at the same time, but more or less in succession. I advocate very hard pruning the first year after planting, as it is only by this means one can get a good-shaped plant the following year.

Another golden rule is to use the hoe; this operation aerates the ground and should be done at least once a week during the Summer.

There is no need to do it deeply, but just to loosen the top surface, especially after rain.

If at any time one contemplates exhibiting, it is a very good plan towards the end of May to thin out some of the shoots that are growing towards the centre of the plant, so as to let in the light and air and strengthen the remaining shoots.

If no other ingredients are handy, a very good liquid manure can be made by adding a quarter of an ounce of sulphate of ammonia to one gallon of water. This should be applied at intervals of a fortnight between May and mid June, at the rate of one gallon to each plant, care being taken not to allow any to get on the foliage.

The following is a list of twelve good varieties best suited for general cultivation in or around London :—

Reds.—George Dickson, Hugh Dickson.

Pinks.—Mrs. Henry Bowles, Mrs. Henry Morse, Molly Bligh, Mrs. A. R. Barraclough.

Whites.—Frau Karl Druschki, Edel, Mrs. Franklin Dennison, Mrs. Foley Hobbs.

Yellow.—Mabel Morse.

Salmon Flesh.—Madame Butterfly.

Nature's " Queen of Flowers " stands unrivalled, and is well worth any care and trouble bestowed upon her. By giving her a bed to herself and constant attention to any foes, one is well repaid by the beautiful blooms she will give.

THE ROSE GARDENS OF BULGARIA.

By HERBERT COWLEY, Editor of "Gardening Illustrated."

If there is one place that I would like to see again above all others it is the Rose fields of Bulgaria. To stand on a hilltop at Kazanlik, overlooking a wide and fertile valley of Roses where Bulgarian peasants—men, women, lads and lassies in picturesque costumes, are all busy picking and distilling the blooms, is a sight never to be forgotten. Roses are grown on an extensive scale in Bulgaria for the making of Attar of Roses, and in June when Rose-picking is at its height, the air of the whole countryside is filled with their precious scent. It is a delicious odour, surely there is none to compare to it. One drop of pure Attar of Roses is sufficient to scent a whole room with its delightful and refreshing fragrance. The pure Attar is now almost impossible to procure, as it is freely adulterated with oil of geranium.

There are moments in the lives of everyone that stand out for supreme happiness. Come with me and be transported, as it were, on the magic carpet to that hill-top near Kazanlik in the heart of the Rose-growing district. It is six o'clock on a lovely June morning, when the sun has just risen over the mountain tops. Bulgarian women, young and old, are in the fields, hurrying to gather the blooms, for this must be finished within an hour: they are plucked in the cool of the morning while the dew is still on them. It would never do to gather Roses for the making of Attar when the sun is high in the heavens. It can be very hot in Bulgaria, the sun soon bleaches the blooms, and "A Rose that once has blown for ever dies." Moreover, the peasants rest in the heat of the day, and has not experience taught them that the best Attar is made from Roses gathered in the early morning?

Let us turn our attention to the Rose-pickers in the fields. Look how quick their nimble fingers are in plucking the blooms. They need



THE VALLEY OF KAZANLIK.
ROSE PICKERS AT WORK.





VIEW OF A BULGARIAN ROSE FIELD.
THE DISTILLERY.

to be, for it has been estimated that it takes 100,000 blooms to make one ounce of the precious Attar. The girls in the fields are prettily dressed, many of them putting Roses in their hair. They love pretty colours, and wear bright red dresses embroidered with black and golden thread. These gay colours seem to fit the surroundings, as, indeed, native costumes always do; the pity is that the people are rapidly becoming Westernised in the matter of dress. The Roses, complete with calyx, are gathered and placed in baskets, which as soon as they are filled are carried off to the distillery near by, where they are put in heaps, or else emptied straight into huge retorts. Up and down the long rows of Roses girls are working hard, and the filled baskets are being hurried to the distillery.

Now let us descend and take a close inspection of the open sheds where the Roses are distilled. Men wearing red loin cloths, sandals, but very little else, are busy keeping the fires stoked—very warm work. The blooms are distilled and re-distilled in huge vats, or retorts. It is a long and tedious process and the odour within the shed is almost overpowering, many times stronger than any pot-pourri. Strange it is that so much fragrance is wasted on the desert air. The busy scene on this June morning fires the imagination, but the richest imagination could not even paint the scene, or the readiest fancy embellish it. Only those who have imbibed the rich colours of the near East can close their eyes and dream of it. It is the pink Damask Rose (*Rosa damascena*) that is grown, a Rose, curiously enough, that is not known in an uncultivated condition. The hedges dividing one Rose plantation from another are composed of the white *Rosa alba*. It is a slightly stronger grower than the Damask Rose, and makes a well-defined hedge, though its perfume is not quite as good. The blooms, however, are picked indiscriminately when harvesting takes place. Blooms and buds are mixed together, even the calyx is not removed, the whole lot being distilled. The Damask Rose, which grows to a height of about 4 feet, is planted close together, and whole valleys are filled with Roses as far as the eye can see. There is a treat in store for those who have yet to see the Rose fields of Bulgaria on an early June morning. Without laying too heavy a tax on the imagination, one may think oneself transported into the midst of the Eastern world.

ROSE STOCKS.

By B. E. CANT, Friern Barnet.

The choice of the best stock on which to bud Roses has been a vexed question for some years, and seems to be getting more so each year. Time was, some 30 years or more back, when little thought, and certainly no worry, was ever given to the matter; the purchaser of Rose plants gave his nurseryman credit for knowing the best stock, and I do not think his trust was misplaced; anyway, Roses of those days were as fine as they are to-day. The Manetti stock was a great deal used, and it seemed to suit the old H.P. varieties.

With the exception of Roses ultimately intended for potting up, the number of plants grown on the Manetti stock is negligible, and the De la Grifferaie upon which climbers, Bourbon and some of the old-fashioned garden Roses were budded has practically gone out of cultivation. The Manetti certainly gave wonderful results for maiden H.P. Roses, and I can remember large beds (hundreds of plants) of such sorts as La France, Madame Gabriel Luizet, Ulrich Brunner, that were worked on it lasting for years, until they eventually became veritable stools, and probably to a great extent on their own roots. But there is little purpose in talking about Manetti now—the extension of the H. Tea and Pernetiana classes doomed it. We still have, as we always had, the *English* briar to turn to. And what is wrong with it? Perhaps trouble originated when seedling briars from abroad became popular with many growers and brought with them a conglomeration of mixed sub-species of briar (as seedlings always will), all of course called R. Canina. In a large batch of many thousands of seedling briars from Holland, Germany or France, one can detect endless differences by their habit of growth, time of maturity and falling of

leaf. Some are thorny, others almost thornless, some upright in growth, while others grow close to the ground like a water briar or a *wichuraiana*; many common sweet briars, too, come with them from these. Batches of cuttings have been taken indiscriminately and, when rooted, disseminated to all parts of the country, and so resulting in a general mix-up.

If one would only return to the good old days and obtain briar cuttings from the hedgerows, where it is possible to see that all are alike, and plant these and no others, it would be of the greatest advantage to all.

I remember in my quite young days my late father used to send out several reliable men each Autumn to obtain from hedgerows wood for making briar cuttings. These were ultimately planted out as rooted stocks, and when in full growth they *were* all alike from end to end of a row. If this were done then it could be repeated now. The distinct advantage of making one's own cuttings from neighbouring hedgerow briars is the surety of getting the briar which is indigenous to your own soil and should, therefore, be happy in your own garden.

The Polyantha stock is really useful; all the rambler type and climbing polyanthas do exceptionally well on it. I have recollections of potting up a quantity of ramblers for flowering under glass, budded on this stock, with wonderful results. The plants were a mass of flower from base to top, and this too the first Spring after they were potted up. All the dwarf polyantha Roses naturally do well on this stock, but I would not advise it for Teas. We tried some varieties on it; they made exceptional growth, but were very pithy, and when a moderately severe frost came along, it practically killed outright sorts like Madame Cusin and Madame de Watteville, even when they were carrying shoots as thick as one's finger.

I should imagine the dwarf Rugosa stock would produce much the same result. I cannot speak much from personal experience of this stock, but from what I have seen of plants that are growing on it, coupled with what I have heard, I think it is a stock to avoid if one desires longevity of their Rose plants; I am told, too, that it brings that dreaded disease, "Black Spot," in its trail.

But as a standard stock the Rugosa seems to be coming into favour; it certainly produces fine heads the first year, but it is too early to decide whether it really has established itself as a successor to the English briar. My doubt is whether some of the very highly coloured H. Teas, and more especially the rich coloured Pernetiana Roses that are worked on it would live. Some of these are a little difficult even on English briars; what will they be on Rugosa? I have seen Angéle Pernet an absolute failure on the Rugosa stock.

The comparative cheapness of the stock as raw material for Standard Roses seems at present its chief influence, as nearly every stock grows, which is far from the case in some seasons with the English standard briar; hence the latter is always quoted at a higher price in all lists.

Of the Laxa stock I have nothing to say in its favour. I am surprised that nurserymen should use it. In the first place it is most treacherous at budding time. The sap suddenly stops in a most astonishing manner, and without any apparent reason. If it is not budded early, almost at the moment when sap is at its highest, a few days onward will be too late, and any attempt to bud it then will prove hopeless. Finally it develops Red Rust badly, not only on the stock, but also on the Rose that is worked on it.

I know when budded at the right time it will produce strong plants, but I am speaking of how I found it on heavy soil, and when you lift them—oh! the roots—coarse, ugly, fangy things that look as unlike good quality Rose plants as it is possible to imagine. The plant too, gets weaker and weaker every year, while it throws out suckers in all directions.

Nothing can be said against experimenting with stocks of various types and classes, but up to the present we do not seem to have anything definite, unless it has emphasised the fact that the old English briar is still the safest and most reliable stock for all Roses.

SOME REASONS WHY ROSES FAIL TO MAKE SATISFACTORY GROWTH.

By WALTER EASLEA.

Our Society has ever manifested a desire to encourage the novice in all that pertains to the successful cultivation of the Rose, and as its members are annually increasing in number, it must follow there are many who gladly welcome any hints that can be given them in the *Annual*. These few notes are penned for the novice only, as of course the advanced Amateur is well aware of many of the cultural points I shall mention. I was, in a measure, induced to write this short article from the fact that I had been recently requested by a lady to visit her Rose garden, and to try and solve the problem of the unsatisfactory condition of her plants. The conclusions I arrived at from this visit, and the considerations suggested by it, are embodied in the following notes. I propose to consider the subject under three headings.

SOILS.

Poor in Lime.—The soil may be very poor in lime, so much so that although frequently manured the plants derive but slight benefit from such treatment, owing to the fact that little if any lime is present to neutralise the injurious acids which usually abound in heavily-manured ground. Heavy clay soils would be greatly improved by an application of slaked lime, in the form of a fine powder, during the winter months—say at the rate of about 8 ounces to the square yard. The lime should afterwards be well hoed into the surface. I prefer powdered lime to chalk, as it is more easily disseminated throughout the soil. Clay soils are also much benefited by a liberal application of burnt earth. In the beautiful Rose garden at Chalkwell Park, Westcliff-on-Sea, probably the finest public Rose garden in England, where the soil is a heavy clay, large quantities of burnt earth have been incorporated. The soil

is one of the heaviest in Essex, and that is saying a good deal, and I have never seen Roses make so much growth as Madame Abel Chatenay, Lady Pirrie, Mrs. Wemyss Quin, Irish Elegance, Betty Uprichard, etc., some growing to the height of from 4 feet to 5 feet, although only planted two years ago. I am greatly in favour of adding basic slag to the subsoil at the rate of 6 or 8 ounces per square yard, when preparing new Rose beds, for in so doing lime is supplied in the form of phosphate, which is highly beneficial to Roses. Basic slag varies considerably, and it should be obtained 80 to 90 per cent. of fineness from a reliable source.

Poverty of Soil.—In forming Rose beds soil is often imported for the purpose. If it happens to be new soil so much the better, but it may be lacking in just the right food the Roses require. I have seen beds prepared in the following manner: No manure was mixed with the top soil, but plenty added to the subsoil, so that until the new plants were able to reach this food they made very poor growth. Whereas well decayed manure should have been incorporated with the upper soil. Manure from an old spent hot-bed would be splendid, but not the material which goes by the name of farmyard manure. The new soil may also be deficient in bacteria—those wonderful little organisms that help to make it fertile. For my part, if I had a kitchen garden that had been well enriched with manure and lime for vegetables, I would much rather use such soil for Rose beds than any of the so-called special loams. If they are employed let them be blended with some kitchen garden soil, which is generally rich in humus.

Waterlogged.—The soil may be waterlogged, and the remedy here would be drainage, or if drainage is impossible raise the surface of the beds.

Too Porous.—The soil may be too porous. If so, add some clay and a good layer of cow manure, 6 inches thick, about 2 feet beneath surface, to aid in retaining moisture.

Mulching.—Heavy mulchings with manure tend to keep the roots cold and wet, and so hinder rather than assist the growth of the plants. Mulching in Summer, just before hot dry weather sets in, is of course most beneficial, but mulching in the Autumn should be avoided.

Scrapings from Tarred Roads.—Adding scrapings from tarred roads should also be avoided.

PLANTS.

I should like to add a few helpful words as to these.

Stocks.—Many growers, in order to produce large showy plants, bud certain of the Hybrid Teas on the Manetti stock. In some instances they do well but, generally speaking, I would warn all my readers against it—at least for Hybrid Teas. I have seen pitiable failures entirely due to Manetti stock having been used, and more especially with some of the dark Hybrid Perpetuals and Hybrid Teas that have thorny wood.

There is no question but that the briar, either seedling or cutting, is the best stock for dwarf Roses.

Standards.—Standards and half standards on briar stems that are too old should be avoided, as such plants have few fibrous roots. The Rugosa stock for standards is gaining in favour. If *British grown* they make splendid large heads, and all the Pernetiana tribe are far better on Rugosa than briar. We seem to want a stock that will produce the beautiful fibrous roots of the Rugosa with the clean, straight stem of the briar. A well-rooted young briar is still the ideal stock for a standard Rose tree.

Careless Packing.—The plants are sometimes sent out carelessly packed. I saw some at a railway station recently with the roots only covered with a piece of brown paper. It will be well for the Amateur to see that plants sent to him have had their roots and stems encased in straw, or in cardboard or other boxes. The roots should have been dipped in rather thick wet mud, or in the language of the trade grower, they should be “puddled” prior to packing.

Careless Attention on Arrival.—I once had to superintend a large planting of Roses. The plants had been sent in fully a week in advance of the time they were required. Upon my arrival some were lying on

the surface of the ground, while others were still in the crate with the roots as dry as a bone. Such carelessness is virtually courting failure. On receipt they should immediately be "heeled in" or covered with wet straw until the time of planting.

TREATMENT.

Exposure to Sun and Wind.—Too frequently the plants are exposed to sun and wind at the time of planting. It has often made me shudder to see the careless way some gardeners treat sensitive Rose plants. The roots should be kept covered with a wet sack or, better still, "heeled in" some fine soil and taken out one or two at a time for planting.

Root Pruning.—Roses are often planted just as received from the Nurseries. Their roots should be first shortened. In all cases the jagged ends should be cut off with a sharp knife. If planted in the late Spring the Roses themselves should be hard pruned at the time of planting.

Planting in Wet Weather.—Planting in wet weather, when the soil is saturated, should be avoided. If, however, planting must be done it will be well to place about half a peck of good compost about the roots of each plant. This compost should be in a fairly dry state, as when potting a plant. A mixture of old potting soil, burnt earth and leaf mould in about equal parts with a little bone meal added makes a fine compost.

Exposure to Frost.—The roots should never be exposed to, nor should Roses be planted in, frosty weather. The roots are very susceptible to frost, and if they are at all in a brown state it is hopeless to plant them.

Planting too Deeply.—I would rather plant a Rose budded on the seedling briar with the junction a little above the surface, than plant it too deeply. Roses budded on other stocks are best planted with the junction about one inch below the surface of the soil.

Long Shoots.—It is best to shorten long growths directly after planting, unless they can be firmly supported with canes or stakes. Standards should always be staked at the time of planting.

Firm Planting.—Roses cannot be too firmly planted. When planting tread the soil round each plant, and later again when the soil is in a fit condition. Firm planting is essential.

Winter Protection.—Do not smother Roses with long, wet manure. Many Roses are ruined by covering them up with unsuitable material. Roses nowadays only require protection in very exposed cold positions.

Lack of Moisture after Planting.—Roses planted in the late Spring should be well watered just before putting on the final layer of soil. Repeat the watering a week later if dry weather continues.

Strong Stimulants to be Avoided.—One of the most frequent causes of failure is the application of strong stimulants the first season after planting. Only when the plants are established can they assimilate strong food. A correspondent recently wrote saying he had given basic slag, farmyard manure and bone flour when planting his Roses, and he proposed in the following Spring to give some Superphosphate, Nitrate of Soda, and various other ingredients he had been reading about. I gave him Mr. Punch's famous advice—"Don't." On one occasion I was called in to advise a friend who had sadly overdosed his Roses with chemical manures, so much so that many were dead, and when pulled up the roots were found to be quite black. On no account apply strong chemical manures to newly-planted Roses. The rain washes them down, and the roots are compelled to take what they do not require. The proper plan is to wait until the plants are well established. No manure of any kind should be allowed to come into contact with the roots when Roses are first planted.

Pruning Newly Planted Roses.—This is a difficulty with many, as one hates to see fine plants cut down. No Amateur, however, need be afraid to hard prune his plants the first year. By "hard prune" I mean to cut the shoots back to within three to four inches of the base

of the plants, except in the case of Climbing sports, such as Climbing Mme. Abel Chatenay, etc., Climbing Gen. McArthur, etc. These do best when allowed to grow the first year unpruned. Ramblers, if planted before the end of December, need not be pruned the first year. If their growths are well spread out basal shoots will be thrown up during Summer. If planted in Spring then cut back to within 2 feet of their base. As the plants will not have made new roots, they cannot support long growths, and with the drying winds in March they suffer badly.

Transplanting.—I am in favour of transplanting Roses every third or fourth year, not necessarily to a new position; but their roots need looking over and rejuvenating by a peck or so of nice compost, to which some bone flour and charcoal have been added. I am convinced if transplanting were more frequently adopted we should hear of less trouble with black spot and mildew.

Deep Digging.—All Rose beds should, if possible, be dug 2 feet deep. For Standards and Ramblers holes 2 feet each way and as much in depth should be dug out. Decayed manure should be placed well down beneath the roots, and bone flour, about a handful to each plant, incorporated with the surface soil. If the soil is a heavy clay it is best to raise the beds as one would asparagus beds.

In conclusion be sure and get British grown Roses. The majority of foreign Roses are grown in a light, peaty soil heavily irrigated and fair-sized plants are the result; but if the wood is examined it will be found to be unripe and nearly all pith, like a piece of elder wood. To ensure the best results, plants that have been grown in an exposed position should be obtained, as these always transplant best.

MORE RANDOM NOTES.

By J. G. GLASSFORD, Manchester.

Few Rosarians practise the Art—and it is an Art—of raising Roses from seed, and I am not going to attempt to persuade anyone as to whether they should make a start or not. Those who have the enthusiasm will not be put off, and deserve encouragement. Our Editor's article "The Raising of New Roses" in the 1928 *Annual* interested me very much, and should stimulate others by the valuable information of the processes employed.

I have a feeling that anyone without any previous knowledge of the subject might be just a wee bit intimidated by the thought that the raising of Roses from seed is a very exact science. No one who knows will deny that it can be made so, but anyone who knows will also tell you seed can be obtained and grown successfully, given a knowledge of the first principles. Time and patience too, are essential, and the first thing to think about is your greenhouse. The little greenhouse I use for the purpose of raising seeds is quite a small, unheated affair, 12 feet by 8 feet, one side to the South-west and the other North-east, and it was put in that position largely through force of circumstances, but I feel sure it is the right one, as the strongest sun rays are not impeded by the woodwork. A staging of corrugated iron, covered with granite chips, and a barrel for rain water inside completes the greenhouse.

The first important thing is, as our Editor says, to pot your plants in soil which is on the poor side, and see that the drainage is good. Quite good results can be got by potting up plants from the open ground any time before January, and putting them straight into your

cold greenhouse without first plunging them in ashes. I have had quite as successful results from November–December potted plants the following season as from established ones.

Exhibition blooms are not wanted, and if your plants grow vigorously and produce beautiful blooms, you will be disappointed with your seed crop. I remember the late Hugh Dickson telling me the story of his failure at first to get a crop of seed. His father asked him how he thought he was going on. He replied, "Badly, and I have done everything I could think of." His father replied, "The one thing you did not do was to ask my advice." Hugh told me that he felt very ashamed, and he asked his father what he had failed to do, and was told that he had omitted nothing, but had treated his plants too well, and that if he wanted to breed from any stock, fattening was the wrong way to go about it.

The names of a few good seed bearers might be useful: Frau Karl Druschki, Fred J. Harrison, Mrs. H. Stevens, Mélanie Soupert, Doris Dickson, J. G. Glassford, General McArthur, Dr. A. I. Petyt, Mme. Butterfly, Aspirant Marcel Rouyer, and Golden Emblem. Then, again, you will find K. of K. a good pollen parent and, strangely enough, inclined to produce double Roses with a perfume. I have never managed to raise a seed from a K. of K. hip for some reason or other, nor from Padre, and one or two others. Marcia Stanhope objects to form and ripen hips with me, but the pollen will cross with Mrs. H. Stevens or any other Rose. As you progress, however, you will use a few seedlings of your own raising.

The study of Mendelism will not be of as much use in hybridising as your own experience. Some Roses, you will find, produce certain types, but one never knows exactly what to expect. Character may be exaggerated out of all recognition, or disappear entirely, while dwarf and tall varieties cross fertilised do not produce an intermediate one. Again, from two dwarfs you may get a tall variety, though this does not often occur. From Frau Karl Druschki you might, as I did, get a bush having a bud as big as a small egg, having a solid mass of petals too tight to open, or you might get a nearly single pink climber similar to Christine Wright. I have three seedlings from a cross between R.

Mollis and *R. spinosissima* (the Burnet or Scotch Rose) which would make Mendel rub his eyes if he could see them. These plants will, no doubt, change considerably in looks as they develop, but they do not resemble either of the parents, and all three are quite distinct from each other. I mention this to emphasise the unknown possibilities even with two Rose species. How much more of a gamble is it, and must always be, when one is dealing with hybrids.

When you have your seedling bloom, or even after you have grown it as a budded plant, do not come to too hasty a conclusion regarding its merits. In a friend's garden I noticed a fine bloom, and was astonished when told it was one of my own seedlings. I then recognised it by the leaf and perfume, but it does not bloom in a similar way with me. I believe the merits of Lady Pirrie were doubted at one time, and this beautiful Rose was only saved at the last moment. That class of Rose was not in vogue then. Just think of it !

When the time comes for the cross fertilisation process, which with me is about the middle of May, I remove the petals of the seed-bearing bloom, not by cutting with a knife, but by plucking them one by one if it is a tight, or a few at a time if a loose bud. I do not remove the five outer petals on the pollen-bearing bloom, as they help to collect any pollen that may fall.

After the pollination has taken place, the less the hip is covered up the better, unless you are making a special cross. I like to get the temperature up to 70° Fahr., or higher when engaged in the pollinating process, for at a high temperature the pollen ripens quickly. In theory the petals should be removed about 6 in the morning, so that by 2 p.m. everything may be ready. In practice I perform this operation after breakfast, and as I am not at home till after 5 o'clock the pollinating has to wait. Five o'clock Summer time, or even later, seems to be quite satisfactory.*

The germination of the seed is very interesting and elusive. The seed of the Wild, or Dog Rose, *R. canina*, if sown when ripe and kept in a cool greenhouse often will not germinate at all, but if the hips are placed in sand and left out in all kinds of weather for two Winters and

*The best time to pollinate is when the sun is at its fullest.—ED.

one Summer, then rubbed out and sown in the Spring, they will germinate almost at once. The same applies to the seeds of quite a number of the Rose species. I make no pretence of knowing when the seed of each of the many ancestors of the modern hybrids germinate, but I am tempted to think that sowing with bottom heat whenever the seed is ripe is not a very natural proceeding, and may account for some of our failures. Impatience for results may be where we fail, and there may be a type of Rose we are failing to get by not treating the seed in a more natural way.

Early in September, 1928, I went over a box of seeds that were sown in 1927 (I plant my seed in boxes with divisions) and carefully picked out the ungerminated ones, replanting them in fresh soil and with no heat. In less than a month 12 seeds had germinated and were potted up. I would like to say a word of my experiences in dealing with seedlings. Whenever the seedling appears and has straightened up, I pot it up in the smallest pot I can get hold of, about $1\frac{1}{2}$ inches across the top, a little bit of turfy fibre is placed in the bottom, and the pot filled with a mixture of light soil and sharp sand, and made firm. With the blade of a pocket-knife I first make a flat-sided hole in the soil about 1 inch deep. I then go to the box of seedlings and push the knife blade down close to one and lever it up. The seedling is so lifted that the tap root, which is all it possesses in the way of root, is placed to the natural depth in the prepared pot, and the soil gently pressed up. After watering I give the pot a few light taps, just to settle things, and thinly cover the surface of soil with sand. The pots are then stood on a sheet of glass. For some years my young plants were subject to mildew, but since covering the soil with sand and standing the pots on glass I have had little or no trouble from that pest. It may be thought risky to transplant seedlings at this early age, but I have done hundreds this way without loss. A Rose friend once took me to a spot near Peterborough where many wild Roses grow, thousands of them, and we had a most interesting time. There were there sub-species which I had never seen before. It is most extraordinary how local certain types of wild Roses are. I told my friend, who possibly expected more knowledge from me than I could impart, that I could take him to a place in Scotland where an equally large variety of wild Roses grew, but none similar to those we were

looking at. Is it any wonder that we have so many opinions regarding briar stocks when so many sub-species of *R. Canina* exist and are used? * With most of the other stocks, *rugosa*, *Laxa*, *Manetti*, and the like, we can give a definite opinion, for they are distinct. With *R. Canina* it is different, and anyone who takes the trouble to study the roots will find some run to tap roots, others to suckers, others have straggling roots, and some fine fibrous-rooted varieties suitable for a light soil.

I mentioned last year that I was going to Scotland to seek out a Rose growing wild in a certain spot, and was injudicious enough to suggest that I would walk, if necessary. A number of friends kept plying me with questions about this long and wonderful walk, but I went on wheels, and after a good hunt around reached the place indicated on the treasure map. About half a mile away from the spot indicated the Rose was found, and a remarkable sight it was, covered with flowers, and growing among nettles and blackberries.

I have put two gardeners in competition striking cuttings of this discovery, as they were more or less on the spot. The striking of cuttings seems to come quite easy to some gardeners, and some varieties of Roses are easier to strike than others. Taken with a heel of the old wood, inserted in sharp sand round the edge of the pot, etc., is what one reads and hears, but one of these gardeners set me thinking. He said, "I shall put these cuttings round the side of the pot in sand, and give them a good watering, put them in a frame and leave without water until they have a callous." There is more in that saying than meets the eye. The frame keeps the wet from the cuttings, but prevents evaporation of moisture. Sand keeps a certain quantity of air around the heel, and the callous forms quicker on this account. For the same reason budding is more successful in dry weather, the callous forming better and hardening quicker. Late budding failures may be caused by the callous not hardening and being caught by wet before becoming set.

When it is necessary to replace a plant in an established Rose bed, I would like strongly to confirm the soundness of the advice given by two different writers last year. The advice is, briefly, plant the roots

*There are about 34 sub-species of *R. Canina*.—ED.

in fresh, clean soil. Soil which has been heavily manured and charged with humus does not make a good rooting medium; if Roses do not take hold with their roots they will quickly degenerate. The roots of Roses heeled temporarily into the poorest soil will shortly be found to be covered with fine, white rootlets. There is something here you will notice similar to conditions favourable to the striking of cuttings.



MRS. VAN ROSSEM (Pern.).
CERTIFICATE OF MERIT awarded to
Mr. G. A. VAN ROSSEM.



MRS. G. A. VAN ROSSEM.
(H.T.)

Raised by G. A. VAN ROSSEM.

A very fine Rose. The colour is a rich golden yellow, flushed with pale pink. The blooms are fairly large, well formed, and carried erect. The foliage is a dark red, and the plants shown were free of mildew. The habit is vigorous and upright. Said to be a cross between Souv. de Claudius Pernet and Gorgeous. It has somewhat the habit of the latter variety. A very lovely Rose for bedding purposes. In commerce.

POTTERING AROUND THE ROSE GARDEN.

By ERIC HOLROYD, Chipstead.

To a keen gardener, whether a Rosarian or not, the word "Pottering" brings back many pleasant memories. It is probable that many who are reading these lines will be sitting round their fireside, and perhaps be casting their minds back to the happy hours spent "Pottering" around their Rose beds during the past Summer months. To anyone who is not a keen gardener the word "Pottering" may denote middle, or old age, but to a Rosarian there is no such thing, as a lover of Roses never feels old. Thoughts of "Pottering" around the garden will probably recall pleasant hours spent in the oldest of clothes, a few pieces of raffia in one's pocket and a sharp knife. What delightful recollections such memories bring back. It is always a source of greater pleasure to go round a Rose garden with its owner, as he seldom can get beyond many plants before his keen eye sees something to be done, for however perfect matters may appear to the novice, to the keen Rosarian there is always some little thing to do, or some loving attention to bestow on one's Roses. It is a pleasure to notice how reluctant the man who "Potters" is to cut off even the faded bloom of what has been a beloved guest of his for the past few days, one which he had closely watched and cared for from its infancy. The next best thing in the Winter to "Pottering" around the garden is to "Potter" amongst the Rose growers' catalogues and the old *Rose Annuals*, dreaming of the coming Summer. The keen Rosarian sees, too, in his dreams the National Rose Society's card standing up behind one of the Roses in his Exhibition box at the Summer Show, telling the world at large that the Society's Silver Gilt Medal, the height of all "Potterers'" ambitions, had been awarded to one of his pets.

THE ROSE.

Queen of the Garden, we greet thee,
Emblem of national worth,
Thy form is ever the fairest,
That garnisheth the earth.

Queen of the Garden resplendent,
Bloom of unrivalled worth,
Thy fragrance is ever the sweetest,
Thy perfume encircles the earth.

Queen of the Garden most precious,
Flower of infinite worth,
Thy colours are ever the choicest,
That beautify the earth.

Queen of all flowers, we adore thee,
Thy form, thy fragrance, thy hue,
We crown thee in Nature's fair garden,
The sweetest, the choicest, we view.

G. J. ELLIS.

WHY ARE WE NEGLECTED ?

By LEWIS LEVY, Borden, Sittingbourne.

The point that has been puzzling me for some time is Why some Roses are seldom grown and little known, while others of equal, or less merit, are found in most gardens and listed in nearly all catalogues ? Naturally, certain varieties have attributes that are so outstanding and meritorious, that, rightly, they stand near the top of the bill in popularity ; while others are so bad in some respects that they and their names—often high-sounding ones—are quickly and mercifully forgotten.

And yet the fault must really be with the Amateur growers, for if there was any small demand for a Rose, it would certainly be listed and cultivated in quantity by the Nurserymen.

I am forced to think that certain Roses must be unlucky. Just as certain first-class horses continually finish second in their races, and miss the eye of the average race-goer, so certain splendid Roses somehow miss their mark, and are unknown, except to the few who by chance have grown them and realised their charm and worth.

There is also another class of neglected Roses—those splendid ones that had a great vogue when introduced, but have now been quite ousted from their high position, or whose popularity is lessening from year to year, owing to the wealth of new varieties, mostly of startling colours, which have taken the public eye during the last few years. Certainly in regard to the continuous popularity of a Rose, " Distance (in time) does not lend enchantment to the view " the public takes of them.

I will suggest a few names that have occurred to me, or have been suggested by kind friends, which will comply with the title of this paper. I have divided them into classes which, in turn, are sub-divided into those of pre-War origin, and those introduced between the years 1914 and 1923.

CLIMBERS, PRE-WAR.

Gloire de Dijon (Cl. T.). 1850.

Yellowish flesh, shaded reddish salmon. So old and flat, but has true Tea perfume that I must mention it.*

Gruss-an-Teplitz (Cl. H.T.). 1897.

Crimson. Fragrant. Especially good in the Autumn.

Mme. Alfred Carriere (Cl. Nois.). 1879.

A good, fragrant and beautiful climber, which, for some unknown reason, seems to be gradually going out of fashion.

Mme. Berard (Cl. T.). 1871.

Salmon yellow, shaded salmon rose. An attractive and vigorous climber, which is still one of the best.

Mme. Georges Bruant (Rug.). 1887.

Paper white. Seldom seen nowadays, but very good.

Schneezwerg (Rug.). 1911.

Snow-white. Makes a charming little bush.

William Allen Richardson (Cl. Nois.). 1878.

Light yellowish ochre. A good colour, and makes a nice button-hole, but only noticeable in old gardens.*

*Nearly all cottage gardens in Mid-Sussex have plants of these two varieties.—ED.

LATER CLIMBERS.**Fraicheur** (Hy. Wich.). 1921.

Pale lilac rose. One of the prettiest of its colour.

Havering Rambler (Mult. R.). 1920.

Deep cyclamen pink. Its huge trusses of almond blossom blooms make a wonderful show as a pillar.

Purity (Hy. Wich.). 1917.

Pure white. Charming and fragrant.

Star of Persia (Hy. Lutea). 1919.

Sunflower yellow. Very early blooming. Summer flowering.

Kathleen Harrop (Hy. Bourbon). 1919.

Light Rose. A sport of Zéphirine Drouhin, with the true old Rose perfume, and yet is seldom seen.

Queen of Hearts (Cl. H.T.). 1923.

An Australian Rose which never took on. Always in bloom, and carries large blooms with fragrance. Very fine.

Rosabel Walker (Cl. H.T.). 1923.

Deep blood red. An effective semi-climber.

Sunny South (Cl. H.T.). 1923.

Another Australian Rose in a charming colour, and prolific with its blooms. A most delightful semi-climber.

Sammy (Hy. Musk). 1921.

Crimson carmine. One of the best of the Hy. Musks. In bloom from June to Christmas.

Vanity (Hy. Musk). 1920.

Deep cyclamen pink. A showy, tall-growing Hy. Musk.

POLY. POMS.

Tip-Top. 1909.

Orange yellow, edged carmine. A charming little Rose.

Chatillon Rose. 1923.

Carmine crimson, with paler reverse petals. Blooms in big trusses, and certainly one of the best.

Evaline. 1920.

Light rose, with a yellow base. Little known, but very pretty.

Evelyn Thornton. 1920.

Crimson pink, with lighter reverse petals. Seems to be getting better known, but deserves a high place.

Suzanne Turbat. 1919.

Deep madder carmine. A dwarf grower, but very effective.

PRE-WAR DWARFS.

Charles de Lapsse (H.T.). 1910.

Pale rose pink, of very vigorous growth, with well-shaped, full blooms. Seldom seen nowadays.

Cynthia Forde (H.T.). 1909.

Cyclamen pink. Still one of the best in this colour.

Ecarlate (H.T.). 1906.

Light crimson scarlet. A charming little Rose, always in bloom, and very bright, but the wood has too many thorns.

Edu. Meyer (H.T.). 1904.

Reddish salmon. Used to be very popular, but seems to be disappearing from our gardens. Why?

Hon. Ina Bingham (H.T.). 1915.

Pure pink. Little known, but a good Rose.

Hugo Roller (T.). 1907.

Rich lemon yellow, edged crimson, an attractive colour, and good growth.

James Coey (H.T.). 1909.

Deep golden yellow, edged white. Very seldom seen now.

La Tosca (H.T.). 1900.

Pale reddish lilac. Very free blooming and most vigorous. Makes a wonderful head as a standard.

Mme. Jules Bouche (H.T.). 1911.

Amber white. Growth very vigorous, and one of the finest whites for all purposes.

Mme. Ravary (H.T.). 1899.

Pale apricot yellow, reverse of petals deep reddish salmon. Very free blooming, and always pleasing. Said to be outclassed by other varieties, but still hard to beat.

Mme. Segond-Weber (H.T.). 1908.

Peach blossom. Of good growth, and produces full, fine blooms. A fine variety.

Melanie Soupert (H.T.). 1905.

Maize yellow, reverse of petals reddish salmon. Its tints are charming, and the shape of its blooms lovely. I hope I am wrong in thinking it is getting a less popular variety.

Mrs. Aaron Ward (H.T.). 1907.

Light yellowish ochre, reverse of petals deep reddish salmon. As with Mme. Ravary, it should still be grown when space allows.

Mrs. Charles E. Russell (H.T.). 1913.

Deep crimson carmine. Has the true old Rose perfume.

Mrs. David McKee (H.T.). 1904.

Sulphur white. A weakly grower, but produces blooms of perfect shape.

Mrs. E. G. Hill (H.T.). 1906.

Light rose, reverse of petals deep amaranth pink. One of the best of the bi-colour pinks, yet its popularity grows less.

Pauline Bersez (H.T.).

Creamy white, centre yellow. An old French Rose, practically unknown in England, but I am assured by my friends it is a variety very hard to beat.

Pharisaer (H.T.). 1901.

Pale pink. Very hardy and strong in growth, and still well worth growing.

Prince de Bulgarie (H.T.). 1901.

Pale pink. Prodigious in its blooms, and makes a fine standard.

LATER DWARFS.

Amelie de Bethune (H.T.). 1923.

Light old rose, reverse of petals deeper. A French variety which seems to have been overlooked. Opens to very large blooms.

Aspirant Marcel Rouyer (H.T.). 1919.

Pale buff, reverse of petals yellowish salmon. First class all round, and should be in every garden.

Bischof Dr. Korum (H.P.). 1923.

Pale lilac rose. Large, clean blooms of Exhibition size, with strong perfume. A new H.P. which must not be overlooked.

Dorothy Mocatta (H.T.). 1920.

Deep Naples yellow. A decorative semi-double Rose of spreading growth, with good foliage.

Elegante (H.T.). 1919.

Deep amber yellow. A full Rose with perfume. Holds its colour well, and is always in bloom.

Emmeline (H.T.). 1921.

Pale buff. One of my favourite decorative Roses. Has a splendid growth, good foliage, and blooms all through the season. Should be in every garden.

Ethel Somerset (H.T.). 1921.

Deep rose pink. Good for decoration and Exhibition, and has a nice perfume. Slightly inclined to mildew, but otherwise very satisfactory.

F. J. Looymans (H.T.). 1922.

Light saffron yellow. A Dutch variety that seems to be rather neglected considering its sterling qualities.

Franklin (H.T.). 1920.

A pleasing deep salmon flesh. Of good growth, and a very free bloomer.

Hortulanus Fiet (H.T.). 1919.

Yellowish buff. Has excellent growth, and is very free blooming.

James Walley (H.T.). 1923.

Pale buff, reverse of petals reddish salmon, of excellent growth, and quite free. Rather similar to Aspirant Marcel Rouyer.

Jean C. N. Forestier (Pern.). 1919.

A very strong grower, producing plenty of blooms of a striking cochineal carmine colour.

Jeanne Cabanis (H.T.). 1922.

Pale rose pink. From France, and seems to be little known over here. Nice shaped, full blooms, scented.

Jules Tarbart (H.T.). 1920.

Capucine lake. A very free blooming, and beautiful decorative Rose of good growth.

Lady Maureen Stewart (H.T.). 1920.

Deep blood red, a lovely bright colour, with full perfume. Rather a bushy grower.

Mme. Alexandre Dreux (H.T.). 1921.

Saffron yellow. Blooms of medium size, good growth and foliage. Continues in bloom the whole season.

Mary Monro (H.T.). 1921.

Rose pink. The cup-shaped blooms are of a pleasing colour. Best grown as a specimen bush.

Maud (H.T.). 1921.

Deep crushed strawberry. Semi-double.

Mona Hunting (H.T.). 1916.

Pale buff. Blooms are always a good shape, and very free.

Mrs. Henry Winnett (H.T.). 1922.

Deep scarlet crimson, which does not blue. Strong growth, and very good for cutting. Very sweet perfume.*

Mrs. MacKeller (H.T.). 1915.

Deep Naples yellow. An old Rose of good growth, its full blooms being always well shaped.

*One of the best Red Roses.—ED.

Noblesse (H.T.). 1917.

Light maize yellow petals, edged light rose. Not a strong grower.

Portia (H.T.). 1921.

Deep reddish old rose. Though this variety varies in colour, it is always pleasing, and is especially good for massing.

Rose Marie (H.T.). 1918.

Light rose pink. An American Rose with a strong perfume. A good grower, that is suitable alike for Exhibition and decorative purposes.

The General (H.T.). 1921.

Scarlet crimson. Carries the true old rose perfume, and is very free. One of the earliest to flower.

Westfield Star (H.T.). 1920.

Amber yellow. A splendid grower with perfume, and always in flower. One of the very best of the light yellow varieties.



THE NEW ROSES OF 1928.

By THE EDITOR.

The year 1928 produced more new varieties than any of its predecessors, and perhaps the Judges were more exacting, for only seven Gold Medals were awarded. There were many varieties that were not seen at their best, and so only obtained the Certificate of Merit, which means the Judges would like to see them again.

The Spring Show was held in the Royal Horticultural Hall on April 20th. At this Show all Roses staged are grown under glass, and it is somewhat difficult for the Judges to gauge their worth. A Gold Medal was awarded to the raiser of :—

May Wettern (H.T.). A. Dickson & Sons, Ltd. See page 168.

The Summer Show was held at Chelsea on June 29th and 30th, and Gold Medals were awarded to the Raisers of the following varieties:—

Chaplin's Pink Climber (H.T.). Chaplin Bros., Ltd. See page 98.

Souvenir of the Old Rose Gardens (H.T.). B. R. Cant & Sons, Ltd.

A large bloom, quite up to Exhibition size, of good shape. The colour is blush, shaded a deep pink. The habit appeared to be moderately vigorous. Its chief attraction to me was its delightful scent. But why the name ?

Certificates of Merit were awarded to the Raisers of :—

Waltham Cross (H.T.). Chaplin Bros., Ltd.

This is a fine semi-double variety of a brilliant scarlet colour. The blooms, which are carried singly on stiff stems, are slightly scented. The foliage is a reddish green colour, free of mildew. The plant is of vigorous and compact habit of growth. A good Rose, and one that promises to supersede "K. of K." A good bedder.

"Daily Sketch" (Pernet). B. R. Cant & Sons, Ltd.

A wonderful coloured bloom of a rich, glowing orange, inclined to fade with age. The blooms, which are semi-double, are carried erect on stiff stems. A fairly vigorous bedding Rose.

Swansdown (H.T.). A. Dickson & Sons, Ltd.

A very pretty Rose, of a clear ivory white colour. The blooms are a good shape, with lovely broad petals, and are carried erect on long stems. Faintly scented. The foliage is a dark olive green, of fairly vigorous habit. It will be seen at its best in a dry season.

James Rea (H.T.). S. McGredy & Son.

This is a large Rose of Exhibition form. The colour is a deep pink. The blooms are well formed, with a high, pointed centre, and carried erect. The habit is moderately vigorous and free. It should be a useful garden variety.

Edith Nellie Perkins (H.T.). A. Dickson & Sons, Ltd.

A Mine. Butterfly type of bloom of somewhat intricate shape. The colour is a cream, shaded orange buff. The foliage is a dark green, and habit of growth fairly vigorous. Slightly scented.

Advocate (H.T.). A. Dickson & Sons, Ltd.

A vigorous growing Rose, of a rich crimson colour. The blooms, though not full, are large, and a good shape, with fine broad petals. Sweetly scented. The foliage is a dark olive green, and free of mildew. A good bedding variety, and occasionally large enough for the Exhibition box.

The Provincial Show was held at Saltaire on July 11th and 12th, and Certificates of Merit were awarded to the raisers of :—

Gladys Benskin (H.T.). A. Dickson & Sons, Ltd.

A charming variety, with a very pleasing colour, golden yellow, deeply veined and shaded salmon cerise. The blooms are fairly large and of good shape. Very sweetly scented. The foliage is good, and, as seen, free of mildew. Should prove a very useful Rose for bedding purposes.

Elizabeth Arden (H.T.). George Prince. See page 211.

The Show of New Roses was held in the Royal Horticultural Hall on Tuesday, July 24th, and Gold Medals were awarded to the Raisers of :—

McGredy's Ivory (H.T.). S. McGredy & Son. See page 207.

Lord Rossmore (H.T.). Dr. J. Campbell Hall. See page 135.

Certificates of Merit were awarded to the Raisers of :—

Violet Simpson (H.T.). John Simpson. See page 188.

Mrs. Sam McGredy (H.T.). S. McGredy & Son. See page 123.

Britannia (poly. pom.). The Burbage Nurseries.

This Rose can perhaps be described as a dwarf-growing "Hiawatha," the single-flowering blooms being crimson, with a white centre. Will make a companion to Alice Amos.

Baby Betty (poly. pom.). The Burbage Nurseries.

A very pretty novelty, perhaps one might almost say curiosity, the big blooms being yellow, with a peculiar red tinge in the buds which changes to a clear pink as the blooms age. The plants are fairly vigorous, and the foliage is a dark green, free of mildew. Should prove very useful for dwarf bedding.

The Autumn Show was held in the Royal Horticultural Hall on September 7th and 8th, and a Gold Medal was awarded to the Raisers of :—

Portadown Fragrance (H.T.). S. McGredy & Son. See page 178.

J. C. Thornton (H.T.). Bees, Ltd.

This Rose received a Certificate of Merit at the Show in 1926, and it was not staged in very fine condition. The blooms are of medium size, with large broad petals that are somewhat inclined to twist over rather gracefully. The colour is a rich glowing crimson. The plant shown was vigorous and fairly free of mildew. It had only one failing, and that was lack of perfume. In commerce.

Certificates of Merit were awarded to the Raisers of :—

Mrs. G. A. van Rossem (H.T.). G. A. van Rossem. See page 243.

McGredy's Scarlet (H.T.). S. McGredy & Son. See page 259.



McGREDY'S SCARLET (H.T.).

CERTIFICATE OF MERIT awarded to
Messrs. SAMUEL McGREDY & SON, Portadown.



McGREDY'S SCARLET.
(H.T.)

Raised by Messrs. SAMUEL McGREDY & SON, Portadown, N. Ireland.

A very pretty Rose of intense scarlet colour. The blooms are of medium size, and well formed, very sweetly scented. The habit is vigorous and branching. The foliage is a dark olive green, fairly free of mildew. Will make a pretty bedding variety.

THE ROSE ANALYSIS, 1928.

By THE EDITOR.

The season of 1928 will probably be looked back upon as one of the best years for Roses that we have had for some time. The plants went right on from pruning time without a check, and by the time of the Summer Show in many districts they were past their best. The year, however, was remarkable for the number of gales that occurred during the latter days of June, which reached a climax the first day of the Chelsea Show, when a velocity of 59 miles per hour was registered on three occasions during the day. The Garden and Decorative Roses seem to become more beautiful than ever, while the perfection of cultivation now reached by both Nurseryman and Amateur alike is marvellous.

EXHIBITION ROSES.

By the term "Exhibition Roses" it is understood those Roses that are staged in Exhibition boxes or baskets as specimen blooms only. For the present Analysis, voting papers were sent to 14 Nurserymen and 15 Amateurs. The total number of varieties selected by the Nurserymen was 120, and by the Amateurs 96. These were tabulated, and any Rose that had received less than nine votes deleted. The Nurserymen's selection, Table 1, and the Amateurs', Table 2, are shown separately.

Table 1.—EXHIBITION ROSES
(Nurserymen).

Table 2.—EXHIBITION ROSES
(Amateurs).

Position.	NAME.	Number of Votes.	Position.	NAME.	Number of Votes.
1	Captain Kilbee-Stuart	14	1	Candeur Lyonnaise	15
1	George Dickson	14	1	Dame Edith Helen	15
1	Mabel Morse	14	1	Frau Karl Druschki	15
1	Mrs. Charles Lamplough	14	1	George Dickson	15
1	Mrs. Henry Bowles	14	1	J. G. Glassford	15
6	Admiration	13	1	Mabel Morse	15
6	Dame Edith Helen	13	1	Mrs. Charles Lamplough	15
6	Frau Karl Druschki	13	1	Mrs. Foley Hobbs... ..	15
6	Lady Inchiquin	13	1	Mrs. Henry Bowles	15
6	Mrs. Henry Morse	13	10	Augustus Hartmann	14
6	Rev. F. Page-Roberts	13	10	Dean Hole	14
12	Earl Haig	12	10	H. V. Machin	14
12	Gorgeous	12	10	Hugh Dickson	14
12	Hugh Dickson	12	10	Miss Willmott	14
12	J. G. Glassford	12	10	Mrs. A. R. Barraclough	14
12	Mrs. Foley Hobbs	12	10	Mrs. George Marriott	14
17	H. V. Machin	11	10	Mrs. Henry Morse	14
17	Mrs. A. R. Barraclough	11	18	Admiration	13
19	Augustus Hartmann	10	18	Captain Kilbee-Stuart	13
19	Miss Willmott	10	18	Earl Haig	13
19	Mrs. George Marriott	10	18	Gorgeous	13
22	Candeur Lyonnaise	9	18	Lady Inchiquin	13
22	Caroline Testout	9	18	Rev. F. Page-Roberts	13
22	Edel	9	24	Edel	12
22	Louise Cretté	9	24	Florence Forrester	12
22	Mrs. Beatty	9	24	Mrs. George Norwood	12
22	Mrs. George Norwood	9	27	Mrs. H. R. Darlington	11
22	Mrs. John Laing	9	27	Mrs. John Laing	11

As a rule, the opinions are fairly even, but it is of interest to again record the Nurserymen give preference to those varieties that are good for both Exhibition and Garden purposes, with one exception, Captain Kilbee-Stuart. The old-fashioned idea that Exhibition Roses are always best as maidens has now been exploded, and nowadays the best Exhibition blooms can be, by judicious pruning and thinning the shoots, obtained from cutback plants.

				<i>Placed by Nurserymen.</i>	<i>Placed by Amateurs.</i>
Captain Kilbee-Stuart	...	...	1	18	
Admiration	...	...	6	18	
Dame Edith Helen	...	...	6	1	
Frau Karl Druschki	...	...	6	1	
Lady Inchiquin	...	...	6	18	
Rev. Page-Roberts	...	...	6	18	
Mrs. Henry Morse	...	...	6	10	
Earl Haig	...	...	12	18	
Gorgeous	...	...	12	18	
J. G. Glassford	...	...	12	1	
Mrs. Foley Hobbs	...	...	12	1	
H. V. Machin	...	...	17	10	
Mrs. A. R. Barraclough	...	...	17	10	
Augustus Hartmann	...	...	19	10	
Mrs. Geo. Marriott	...	...	19	10	
Miss Willmott	...	...	18	10	
Candeur Lyonnaise...	...	...	22	1	
Mrs. John Laing	...	...	22	27	

In the Nurserymen's Table 1, the following Roses have been left out, they having received less than nine votes, but they appear in the Amateurs' Table 2 in the following order :—

Dean Hole	...	...	...	...	10
Florence Forrester	...	...	...	...	24
Mrs. H. R. Darlington	...	...	...	...	27

In the Amateurs' Table 2 the following varieties have been left out, they having received less than 11 votes, but they appear in the Nurserymen's Table 1 in the following order :—

Caroline Testout	...	...	...	...	...	22
Mrs. Beatty	...	...	...	...	...	22
Louise Cretté	...	...	...	...	...	22

Tables 1 and 2 have been put together, and any Rose that has received less than 17 votes in all deleted. The results are given in Table 3.

Table 3.—EXHIBITION ROSES.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	29	15	14	George Dickson, H.T....	1912	Deep velvety crimson, heavily veined.
1	29	15	14	Mabel Morse, H.T.	1922	Rich golden yellow.
1	29	15	14	Mrs. Charles Lamplough, H.T.	1920	Lemon chrome.
3	29	15	14	Mrs. Henry Bowles, H.T.	1921	Glowing rose.
5	28	15	13	Dame Edith Helen, H.T.	1926	Rich glowing pink.
6	28	15	13	Frau Karl Druschki, H.P.	1900	Pure white.
7	27	13	14	Captain Kilbee-Stuart, H.T.	1922	Brilliant scarlet crimson.
7	27	15	12	J. G. Glassford, H.T.	1921	Scarlet crimson.
7	27	15	12	Mrs. Foley Hobbs, T.	1910	Ivory white.
7	27	14	13	Mrs. Henry Morse, H.T.	1919	Silvery rose pink.
11	26	13	13	Admiration, H.T.	1922	Soft cream, washed and shaded vermillion.
11	26	14	12	Hugh Dickson, H.P.	1904	Crimson, shaded scarlet.
11	26	13	13	Lady Inchiquin, H.T....	1921	Rose pink, suffused orange.
11	26	13	13	Rev. F. Page-Roberts, H.T.	1921	Orange gold to saffron yellow.
15	25	13	12	Earl Haig, H.T.	1921	Deep reddish crimson.
15	25	13	12	Gorgeous, H.T.	1915	Orange yellow, flushed copper.
15	25	14	11	H. V. Machin, H.T.	1914	Scarlet crimson.
15	25	14	11	Mrs. A. R. Barraclough, H.T.	1924	Carmine pink.
19	24	14	10	Augustus Hartmann, H.T.	1914	Brilliant metallic red.
19	24	15	9	Candeur Lyonnaise, H.P.	1913	Pure white, base of petals sulphur.
19	24	14	10	Miss Willmott, H.T.	1916	Soft creamy white.
19	24	14	10	Mrs. George Marriott, H.T.	1918	Cream, suffused pink.
23	21	12	9	Edel, H.T.	1919	White.
23	21	12	9	Mrs. George Norwood, H.T.	1914	Bright rich pink
25	20	14	6	Dean Hole, H.T.	1904	Pale silvery rose, deeper shaded.
25	20	11	9	Mrs. John Laing, H.P.	1887	Rosy pink.
27	19	10	9	Caroline Testout, H.T.	1900	Bright warm pink.
27	19	12	7	Florence Forrester, H.T.	1914	Pure white.
27	19	10	9	Louise Cretté, H.P.	1915	Pure white.
30	17	10	7	White Maman Cochet, T.	1897	White, tinged lemon.

On comparing Table 3 with the results in last year's *Annual*, we find that old variety George Dickson has again reached the top, having risen from No. 5. Mabel Morse, a rich golden yellow, has risen from

No. 8 to No. 1. Dame Edith Helen, rich glowing pink, has risen from No. 29 to No. 5—truly a big jump. This variety blooms best on the weakly shoots. Lady Inchiquin, rose pink, suffused orange, has risen from No. 16 to No. 11. Earl Haig, deep reddish crimson, has risen from No. 19 to No. 15. Mrs. A. R. Barraclough, carmine pink, a most beautiful variety, has risen from No. 31 to No. 15. We shall expect to see this variety in a much higher position next year. On the other hand, Frau Karl Druschki, pure white, has fallen from No. 1 to No. 5. Captain Kilbee-Stuart, brilliant scarlet crimson, that headed the Table last year, has fallen to No. 7. Gorgeous, orange yellow, flushed copper, has fallen from No. 11 to No. 15. H. V. Machin, scarlet crimson, has fallen from No. 11 to No. 15. Miss Willmott, soft creamy white, edged pink, perhaps the most beautiful of all Roses, has fallen from No. 16 to No. 19. Mrs. George Marriott, cream, suffused pink, has fallen from No. 10 to No. 19. Louise Cretté and Florence Forrester, both pure white, have fallen from No. 22 to No. 27. This latter variety is quite useless as a cutback. One is pleased to note that our old favourite Mrs. John Laing has slightly improved her position.

ROSES FOR GENERAL GARDEN CULTIVATION.

This term includes all varieties, whether Exhibition, Garden, Decorative, Rambling or Polyantha Roses. Practically the same procedure has been adopted as last year, the country being divided by an imaginary line drawn across the map from Lowestoft to Bristol. The results from voters residing on the Northern side of the imaginary line are given separately in Tables 4, 5 and 6, and those residing on the Southern side of the imaginary line are given in Tables 7, 8 and 9. These tables should prove very helpful to Amateurs living in the districts covered, as they give a good idea of the best varieties for them to grow.

I am rather surprised at the position occupied by Marcia Stanhope. It is a Rose that is useless with me as a cutback, while at Enfield I could not grow it at all. Clarice Goodacre and White Ensign are both superior.

The final results as given in Tables 6 and 9 have been put together, and the summary is given in Table 10. This year there is a Class at the Summer Show, Chelsea, for 24 bunches of varieties mentioned in Table 10. It should prove very interesting and instructive.

ROSES FOR GENERAL GARDEN CULTIVATION.

Table 4.—(Nurserymen, North).

Table 5.—(Amateurs, North).

Position.	NAME.	Number of Votes.	Position.	NAME.	Number of Votes.
1	Betty Uprichard	5	1	Betty Uprichard	6
1	Christine	5	1	Emma Wright	6
1	Emma Wright	5	1	Etoile de Hollande	6
1	Etoile de Hollande	5	1	Golden Emblem	6
1	Los Angeles	5	1	K. of K.	6
1	Mabel Morse	5	1	Lady Pirrie	6
1	Marcia Stanhope	5	1	Los Angeles	6
1	Mme. Butterfly	5	1	Mme. Butterfly	6
1	Mrs. Henry Bowles	5	1	Mrs. Henry Morse	6
1	Shot Silk	5	1	Shot Silk	6
11	Angele Pernet	4	11	Angele Pernet	5
11	Dame Edith Helen	4	11	General McArthur	5
11	Hortulanus Budde	4	11	Independence Day	5
11	K. of K.	4	11	Lady Inchiquin	5
11	Lady Pirrie	4	11	Mme. Edouard Herriot	5
11	Mrs. Henry Morse	4	11	Mrs. Henry Bowles	5
17	Caroline Testout	3	11	Mrs. Wemyss Quin	5
17	Doris Trayler	3	11	Ophelia	5
17	General McArthur	3	11	W. F. Dreer	5
17	Golden Emblem	3	20	Admiration	4
17	Lady Inchiquin	3	20	Caroline Testout	4
17	Mme. Abel Chatenay	3	20	Christine	4
17	Miss C. E. van Rossem	3	20	Gorgeous	4
17	Mrs. A. R. Barraclough	3	20	Hugh Dickson	4
17	Mrs. Wemyss Quin	3	20	Hortulanus Budde	4
17	Ophelia	3	20	Mabel Morse	4
17	Scarlet Glory	3	20	Mrs. Herbert Stevens	4
17	W. F. Dreer	3	20	Red Letter Day	4
			20	Rev. F. Page-Roberts	4

Table 6.—ROSES FOR GENERAL GARDEN CULTIVATION, NORTH.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	11	6	5	Betty Uprichard, H.T.	1921	Orange pink.
1	11	6	5	Emma Wright, H.T.	1917	Pure orange.
1	11	6	5	Etoile de Hollande, H.T.	1919	Bright dark red
1	11	6	5	Los Angeles, H.T.	1916	Salmon rose, shaded apricot.
1	11	6	5	Mme. Butterfly, H.T.	1920	Pink, shaded apricot.
1	11	6	5	Shot Silk, H.T.	1923	Orange rose, shaded yellow.
7	10	6	4	K. of K., H.T.	1917	Brilliant scarlet crimson.
7	10	6	4	Lady Pirrie, H.T.	1910	Delicate coppery crimson.
7	10	5	5	Mrs. Henry Bowles, H.T.	1921	Glowing rose.
7	10	6	4	Mrs. Henry Morse, H.T.	1919	Silvery rose pink.
11	9	5	4	Angele Pernet, Pernetiana	1924	Dark apricot, shaded.
11	9	4	5	Christine, Pernetiana	1918	Deep golden yellow.
11	9	6	3	Golden Emblem, Pernetiana	1916	Golden yellow.
11	9	4	5	Mabel Morse, H.T.	1922	Rich golden yellow.
15	8	5	3	General McArthur, H.T.	1905	Bright scarlet crimson.
15	8	4	4	Hortulanus Budde, H.T.	1919	Dark velvety red.
15	8	5	3	Lady Inchiquin, H.T.	1921	Rose pink, suffused orange.
15	8	5	3	Mrs. Wemyss Quin, Pernetiana	1914	Canary yellow.
15	8	5	3	Ophelia, H.T.	1912	Salmon flesh.
15	8	5	3	W. F. Dreer, H.T.	1920	Golden yellow, shaded peach.
21	7	4	3	Caroline Testout, H.T.	1890	Bright warm pink.
21	7	5	2	Independence Day, H.T.	1919	Deep orange.
21	7	2	5	Marcia Stanhope, H.T.	1922	Pure white.

ROSES FOR GENERAL GARDEN CULTIVATION.

Table 7.—(Nurserymen, South).

Table 8.—(Amateurs, South).

Position.	NAME.	Number of Votes.	Position.	NAME.	Number of Votes.
1	Betty Uprichard	9	1	Betty Uprichard	9
1	Angele Pernet	9	1	Emma Wright	9
1	Etoile de Hollande	9	1	Etoile de Hollande	9
1	Mme. Abel Chatenay	9	1	K. of K.	9
1	Mme. Butterfly	9	1	Lady Inchiquin	9
1	Shot Silk	9	1	Miss C. E. van Rossem	9
7	Golden Emblem	8	1	Shot Silk	9
7	Lady Pirrie	8	8	Golden Emblem	9
7	Lady Inchiquin	8	8	Independence Day	8
7	Mrs. Henry Bowles	8	8	Isobel	8
7	Mrs. Henry Morse	8	8	Lady Pirrie... ..	8
7	Mrs. Wemyss Quin	8	8	Los Angeles	8
7	W. F. Dreer	8	8	Mme. Edouard Herriot	8
14	Emma Wright	7	8	Mrs. Henry Bowles	8
14	General McArthur	7	8	Mrs. Henry Morse	8
14	Hortulanus Budde	7	8	Ophelia	7
14	K. of K.	7	17	Caroline Testout	7
14	Los Angeles	7	17	Mme. Butterfly	7
14	Mme. Edouard Herriot	7	19	Angele Pernet	6
14	Miss C. E. van Rossem	7	19	Christine	6
14	Ophelia	7	19	Frau Karl Druschki	6
22	Christine	6	19	General McArthur	6
22	Independence Day	6	19	Mabel Morse	6
			19	Mrs. Wemyss Quin	6

Table 9.—ROSES FOR GENERAL GARDEN CULTIVATION, SOUTH.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	18	9	9	Betty Uprichard, H.T.	1921	Orange pink.
1	18	9	9	Etoile de Hollande, H.T.	1919	Bright dark red.
1	18	9	9	Shot Silk, H.T.	1923	Orange rose, shaded yellow.
4	17	9	8	Lady Inchiquin, H.T.	1921	Rose pink, suffused orange.
5	16	9	7	Emma Wright, H.T.	1917	Pure orange.
5	16	8	8	Golden Emblem, Pernetiana	1916	Golden yellow.
5	16	9	7	K. of K., H.T.	1917	Brilliant scarlet crimson.
5	16	8	8	Lady Pirrie, H.T.	1910	Delicate coppery crimson.
5	16	7	9	Mme. Butterfly, H.T.	1920	Pink, shaded apricot.
5	16	9	7	Miss C. E. van Rossem, H.T.	1920	Velvety red.
5	16	8	8	Mrs. Henry Bowles, H.T.	1921	Glowing rose.
5	16	8	8	Mrs. Henry Morse, H.T.	1919	Silvery rose pink.
13	15	6	9	Angele Pernet, Pernetiana	1924	Dark apricot, shaded.
13	15	8	7	Los Angeles, H.T.	1916	Salmon rose, shaded apricot.
13	15	8	7	Mme. Edouard Herriot, Pernetiana	1913	Vivid terra-cotta, passing to strawberry rose.
13	15	8	7	Ophelia, H.T.	1912	Salmon flesh.
17	14	8	6	Independence Day, H.T.	1919	Deep orange.
17	14	6	8	Mrs. Wemyss Quin, Pernetiana	1914	Canary yellow.
19	13	6	7	General McArthur, H.T.	1905	Bright scarlet crimson.
19	13	5	8	W. F. Dreer, H.T.	1920	Golden yellow, shaded peach.
21	12	7	5	Caroline Testout, H.T.	1890	Bright warm pink.
21	12	6	6	Christine, Pernetiana	1918	Deep golden yellow.
21	12	5	7	Hortulanus Budde, H.T.	1919	Dark velvety red.
21	12	8	4	Isobel, Pernetiana	1916	Orange scarlet.
21	12	3	9	Mme. Abel Chatenay, H.T.	1895	Pale salmon pink, deeper centre.
26	11	6	5	Mabel Morse, H.T.	1922	Rich golden yellow.
27	10	6	4	Frau Karl Druschki, H.P.	1900	Pure white.

Table 10.—ROSES FOR GENERAL GARDEN CULTIVATION.

Position.	Total No. of Votes.	Northern Votes.	Southern Votes.	NAME.	Date of Introduction.	COLOUR.
1	29	11	18	Betty Upprichard, H.T. ...	1921	Orange pink.
1	29	11	18	Etoile de Hollande, H.T. ...	1919	Bright dark red.
1	29	11	18	Shot Silk, H.T. ...	1923	Orange rose, shaded yellow.
4	27	11	16	Emma Wright, H.T. ...	1917	Pure orange.
4	27	11	16	Mme. Butterfly, H.T. ...	1920	Pink, shaded apricot.
6	26	10	16	K. of K., H.T. ...	1917	Brilliant scarlet crimson.
6	26	10	16	Lady Pirnie, H.T. ...	1910	Delicate coppery crimson.
6	26	11	15	Los Angeles, H.T. ...	1916	Salmon rose, shaded apricot.
6	26	10	16	Mrs. Henry Bowles, H.T. ...	1921	Glowing rose.
6	26	10	16	Mrs. Henry Morse, H.T. ...	1919	Silvery rose pink.
11	25	9	16	Golden Emblem, Pernetiana ...	1916	Golden yellow.
11	25	8	17	Lady Inchiquin, H.T. ...	1921	Rose pink, suffused orange.
13	24	9	15	Angele Pernet, Pernetiana ...	1924	Dark apricot, shaded.
14	23	8	15	Ophelia, H.T. ...	1912	Salmon flesh.
15	22	6	16	Miss C. E. van Rossem, H.T. ...	1920	Velvety red.
15	22	8	14	Mrs. Wemyss Ouin, Pernetiana ...	1914	Canary yellow.
17	21	9	12	Christine, Pernetiana ...	1918	Deep golden yellow.
17	21	8	13	General McArthur, H.T. ...	1905	Bright scarlet crimson.
17	21	7	14	Independence Day, H.T. ...	1919	Deep orange.
17	21	6	15	Mme. Edouard Herriot, Pernetiana ...	1913	Vivid terra-cotta, passing to strawberry rose.
17	21	8	13	W. F. Dreer, H.T. ...	1920	Golden yellow, shaded peach.
22	20	8	12	Hortulanus Budde, H.T. ...	1919	Dark velvety red.
22	20	9	11	Mabel Morse, H.T. ...	1922	Rich golden yellow.
24	19	7	12	Caroline Testout, H.T. ...	1890	Bright warm pink.
25	17	5	12	Isobel, Pernetiana ...	1916	Orange scarlet.
25	17	5	12	Mme. Abel Chateauf, H.T. ...	1895	Pale salmon pink, deeper centre.
27	15	6	9	Rev. F. Page-Roberts, H.T. ...	1921	Orange gold to saffron yellow.
28	14	4	10	Frau Karl Druschki, H.P. ...	1900	Pure white.
28	14	7	7	Marcia Stanhope, H.T. ...	1922	Pure white.
30	13	5	8	Mrs. A. R. Barraclough, H.T. ...	1924	Carmine pink.
31	12	4	8	Charles P. Kilham, H.T. ...	1926	Brilliant nasturtium red.
31	12	3	9	Lord Charlemont, H.T. ...	1922	Clear scarlet crimson.
33	10	4	6	Hugh Dickson, H.P. ...	1904	Crimson, shaded scarlet.
33	10	4	6	Red Letter Day, H.T. ...	1914	Glowing scarlet crimson.
35	9	5	4	Dame Edith Helen, H.T. ...	1926	Rich glowing pink.
36	8	2	6	Covent Garden, H.T. ...	1919	Deep crimson.
36	8	2	6	Gwynneth Jones, H.T. ...	1925	Carmine orange.

ROSES SUITABLE FOR EXHIBITION AND GARDEN PURPOSES.

By this term it is meant those varieties that are suited for growing as specimen blooms for staging in Exhibition boxes, if so desired, but are equally good for general garden cultivation. The Nurserymen's Table 11 and the Amateurs' Table 12 are shown separately.

EXHIBITION AND GARDEN ROSES.**Table 11.—(Nurserymen).**

Position.	NAME.	Number of Votes.
1	Mrs. Henry Bowles	14
2	Dame Edith Helen	13
2	Gorgeous	13
2	Lady Inchiquin	13
2	Mabel Morse	13
2	Mrs. A. R. Barracrough	13
2	Mrs. Henry Morse	13
8	Frau Karl Druschki	12
8	Hugh Dickson	12
8	Miss Willmott	12
8	Rev. F. Page-Roberts	12
12	Admiration	11
13	Golden Emblem	10
13	Marcia Stanhope	10
13	Mrs. Charles Lamplough	10
13	Shot Silk	10
17	Caroline Testout	9
17	Los Angeles	9
19	Mrs. Beatty	6

Table 12.—(Amateurs).

Position.	NAME.	Number of Votes.
1	Frau Karl Druschki	15
1	Hugh Dickson	15
1	Lady Inchiquin	15
1	Mrs. Henry Bowles	15
1	Mrs. Henry Morse	15
6	Caroline Testout	14
6	Miss Willmott	14
8	Gorgeous	13
8	Mabel Morse	13
8	Rev. F. Page-Roberts	13
11	Admiration	12
11	Mrs. A. R. Barracrough	12
13	Augustus Hartmann	11
13	Mrs. Charles Lamplough	11
15	Golden Emblem	10
15	Los Angeles	10
15	Shot Silk	10
18	Dame Edith Helen	9
19	Marcia Stanhope	8
19	Margaret Dickson Hamill	8

The final results are given in Table 13.

Table 13.—EXHIBITION AND GARDEN ROSES.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	29	15	14	Mrs. Henry Bowles, H.T.	1921	Glowing rose.
2	28	15	13	Lady Inchiquin, H.T.	1921	Rose pink, suffused orange.
2	28	15	13	Mrs. Henry Morse, H.T.	1919	Silvery rose pink.
4	27	15	12	Frau Karl Druschki, H.P.	1900	Pure white.
4	27	15	12	Hugh Dickson, H.P.	1904	Crimson, shaded scarlet.
6	26	13	13	Gorgeous, H.T.	1916	Orange yellow, flushed copper.
6	26	13	13	Mabel Morse, H.T.	1922	Rich golden yellow.
6	26	14	12	Miss Willmott, H.T.	1916	Soft creamy white.
9	25	12	13	Mrs. A. R. Barracrough, H.T.	1924	Carmine pink.
9	25	13	12	Rev. F. Page-Roberts, H.T.	1921	Orange gold to saffron yellow.
11	23	12	11	Admiration, H.T.	1922	Soft cream, washed and shaded vermillion.
11	23	14	9	Caroline Testout, H.T.	1900	Bright warm pink.
13	22	9	13	Dame Edith Helen, H.T.	1926	Rich glowing pink.
14	21	11	10	Mrs. Charles Lamplough, H.T.	1920	Lemon chrome.
15	20	10	10	Golden Emblem, Pernetiana	1916	Golden yellow.
15	20	10	10	Shot Silk, H.T.	1923	Orange rose, shaded yellow.
17	19	10	9	Los Angeles, H.T.	1916	Salmon rose, shaded apricot.
18	18	8	10	Marcia Stanhope, H.T.	1922	Pure white.
19	16	11	5	Augustus Hartmann, H.T.	1914	Brilliant metallic red.
20	11	7	4	Gladys Holland, H.T.	1916	Buff yellow and apricot.
21	10	8	2	Margaret Dickson Hamill, H.T.	1915	Pale straw.
21	10	6	4	Mélanie Soupert, H.T.	1905	Sunset yellow, suffused amethyst.

ROSES FOR GROWING AS STANDARDS.

The Rugosa Stock has now become firmly established in this country, and is used by many growers in preference to the Briar Stock. It is a fact that some varieties, notably those with Pernetiana blood in them, do well on it, but the colours are not so bright. The stocks should be raised in this country, as they are stouter, and not so sappy as those that are imported. It is a stock suitable for light soils, but on heavy and wet soils the English Dog Briar is still *par excellence*.

Table 14.—(Nurserymen).

Table 15.—(Amateurs).

Position.	NAME.	Number of Votes.	Position.	NAME.	Number of Votes.
1	Mme. Butterfly	14	1	Caroline Testout	15
1	Hugh Dickson	14	2	Etoile de Hollande	14
3	Betty Uprichard	13	2	Frau Karl Druschki	14
3	Etoile de Hollande	13	2	Lady Pirrie	14
3	Frau Karl Druschki	13	2	Shot Silk	14
3	General McArthur	13	6	Betty Uprichard	13
3	Los Angeles	13	6	General McArthur	13
3	Shot Silk	13	6	Hugh Dickson	13
9	Mme. Edouard Herriot	12	6	Los Angeles	13
9	Mrs. Henry Morse	12	6	Mme. Butterfly	13
11	Mrs. Henry Bowles	11	6	Mrs. Henry Bowles	13
12	Caroline Testout	10	6	Mrs. Henry Morse	13
12	Golden Emblem	10	13	Lady Hillingdon	12
12	Mme. Abel Chatenav	10	13	Mme. Edouard Herriot	12
15	Lady Hillingdon	9	15	Golden Emblem	11
16	Covent Garden	8	15	Ophelia	11
16	Lady Pirrie	8	15	W. F. Dreer	11
16	Ophelia	8	18	Mme. Abel Chatenav	9
16	W. F. Dreer	8	18	Mrs. Herbert Stevens	9
			20	Independence Day	8
			20	K. of K.	8
			20	Red Letter Day	8

The final results are given in Table 16.

Table 16.—ROSES FOR STANDARDS.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	27	14	13	Etoile de Hollande, H.T. ...	1919	Bright dark red.
1	27	14	13	Frau Karl Druschki, H.P. ...	1900	Pure white.
1	27	13	14	Hugh Dickson, H.P. ...	1904	Crimson, shaded scarlet.
1	27	13	14	Mme. Butterfly, H.T.	1920	Pink, shaded apricot.
1	27	14	13	Shot Silk, H.T.	1923	Orange rose, shaded yellow.
6	26	13	13	Betty Upprichard, H.T.	1921	Orange pink.
6	26	13	13	General McArthur, H.T.	1905	Bright scarlet crimson.
6	26	13	13	Los Angeles, H.T.	1916	Salmon rose, shaded apricot.
9	25	15	10	Caroline Testout, H.T.	1890	Bright warm pink.
9	25	13	12	Mrs. Henry Morse, H.T.	1919	Silvery rose pink.
11	24	12	12	Mme. Edouard Herriot, Pernetiana ...	1913	Vivid terra-cotta, passing to strawberry rose.
11	24	13	11	Mrs. Henry Bowles, H.T. ...	1921	Glowing rose.
13	22	14	8	Lady Pirrie, H.T. ...	1910	Delicate coppery salmon.
14	21	11	10	Golden Emblem, Pernetiana ...	1916	Golden yellow.
14	21	12	9	Lady Hillingdon, T. ...	1910	Bright golden yellow, shaded fawn.
16	19	9	10	Mme. Abel Chatenay, H.T. ...	1895	Pale salmon pink, deeper centre.
16	19	11	8	Ophelia, H.T.	1912	Salmon flesh.
16	19	11	8	W. F. Dreer, H.T.	1920	Golden yellow, shaded peach.
19	15	8	7	Independence Day, H.T.	1919	Deep orange.
20	13	5	8	Covent Garden, H.T.	1919	Deep crimson.
20	13	8	5	K. of K., H.T.	1917	Brilliant scarlet crimson.
22	12	7	5	Margaret Dickson Hamill, H.T.	1915	Pale straw.
22	12	9	3	Mrs. Herbert Stevens, T.	1910	White.

CLIMBING AND RAMBLING ROSES.

There should be a distinction here. By the word Climbing it is understood to be those varieties that are suitable as Pillars, and by the word Ramblers those varieties that are suitable for covering arches, pergolas and low roofs. As Climbers, Paul's Scarlet Climber, Albertine and Allen Chandler are magnificent, but it is somewhat remarkable that that old variety Mme. Alfred Carrière, creamy white, sweetly scented, is not included in either list. With me it is the first Rose to come into bloom, and the last to go, while it retains its foliage until quite late. It requires little pruning, beyond cutting out the dead wood and shortening back some of the longer shoots.

The Selections are given in Tables 17 and 18, and the final results in Table 19.

CLIMBING AND RAMBLING ROSES.

Table 17.—(Nurserymen).

Table 18.—(Amateurs).

Position	NAME.	Number of Votes.	Position.	NAME.	Number of Votes.
1	Albéric Barbier	14	1	American Pillar	15
1	American Pillar	14	1	Emily Gray	15
1	Excelsa	14	1	Paul's Scarlet Climber	15
1	Paul's Scarlet Climber	14	4	Albéric Barbier	14
5	Emily Gray	13	4	Dorothy Perkins	14
5	Mermaid	13	4	Excelsa	14
7	Climbing Mme. Edouard Herriot	12	4	Lady Godiva	14
7	Minnehaha	12	4	Paul's Lemon Pillar	14
9	Climbing Ophelia	11	4	Mermaid	14
9	François Juranville	11	10	Climbing Ophelia	13
9	Hiawatha	11	11	Blush Rambler	12
12	Blush Rambler	10	11	Climbing Caroline Testout	12
12	Dorothy Perkins	10	11	François Juranville	12
12	Lady Godiva	10	11	Lady Waterlow	12
15	Climbing Caroline Testout	9	11	Sanders' White	12
15	Sanders' White	9	16	Hiawatha	11
17	Albertine	8	16	Climbing Mme. Edouard Herriot	11
17	Allen Chandler	8	18	Léontine Gervais	10
17	Climbing Mme. Abel Chatenay	8	19	Climbing General McArthur	9
17	Léontine Gervais	8	20	Climbing Mme. Abel Chatenay	8

Table 19.—CLIMBING AND RAMBLING ROSES.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	29	15	14	American Pillar, wich. ramb. ...	1909	Clear rose, pink centre.
1	29	15	14	Paul's Scarlet Climber, H. wich. ...	1916	Scarlet.
3	28	14	14	Albéric Barbier, wich. ramb. ...	1900	Yellow buds, changing to creamy white.
3	28	15	13	Emily Gray, H. wich. ...	1916	Golden yellow.
6	27	14	13	Excelsa, wich. ramb. ...	1909	Bright rosy crimson.
7	24	13	11	Mermaid, H. Bracteata ...	1917	Pale sulphur yellow.
7	24	14	10	Climbing Ophelia, H.T. ...	1920	Salmon flesh.
7	24	14	10	Dorothy Perkins, wich. ramb. ...	1901	Rose pink.
10	23	11	12	Lady Godiva, wich. ramb. ...	1908	Pale blush, deeper centre.
				Climbing Mme. Edouard Herriot, Per- netiana. ...	1921	Vivid terra-cotta, passing to strawberry rose.
10	23	12	11	François Juranville, wich. ramb. ...	1906	Deep fawn pink.
12	22	12	10	Blush Rambler, mult. scan. ...	1903	Blush rose.
12	22	11	11	Hiawatha, wich. ramb. ...	1905	Rich crimson, with white eye.
14	21	12	9	Climbing Caroline Testout, H.T. ...	1902	Bright warm pink.
14	21	14	7	Paul's Lemon Pillar, H.N. ...	1915	Sulphur yellow.
14	21	12	9	Sanders' White, wich. ramb. ...	1915	Pure white.
17	18	12	6	Lady Waterlow, H.T. ...	1903	Pale salmon blush, edged carmine.
17	18	10	8	Léontine Gervais, wich. ramb. ...	1906	Salmon rose, tinted yellow.
19	16	9	7	Climbing General McArthur, H.T. ...	1923	Bright scarlet crimson.
19	16	8	8	Climbing Mme. Abel Chatenay, H.T. ...	1917	Pale salmon rose, deeper centre.
21	15	7	8	Allen Chandler, H.T. ...	1924	Vivid scarlet.
21	15	3	12	Minnehaha, wich. ramb. ...	1905	Deep pink.

THE DWARF POLYANTHA ROSES.

There have been many additions to this interesting class of miniature Roses, though I think we are going a little wide of the mark by including Else and Kirsten Poulsen. These are seedlings from that large H.T. Red Star and Mrs. Cutbush, and with me their habit of growth, which is three and four feet high, compels one to classify them as H.T.'s. The new varieties, such as Orange King and Golden Salmon, are quite dwarf, but with me they do not retain their colours in the sun. They make, however, pretty pot plants when grown under glass.

DWARF POLYANTHA ROSES.**Table 20.—(Nurserymen).**

Position.	NAME.	Number of Votes.
1	Coral Cluster	14
1	Else Poulsen	14
1	Kirsten Poulsen	14
4	Orleans Rose	13
5	Golden Salmon	12
6	Eblouissant	11
6	Mrs. W. H. Cutbush	11
8	Edith Cavell	10
8	Ellen Poulsen	10
10	Orange King	8
11	Yvonne Rabier	6
12	Alice Amos	5

Table 21.—(Amateurs).

Position.	NAME.	Number of Votes.
1	Coral Cluster	15
1	Kirsten Poulsen	15
1	Golden Salmon	14
4	Mrs. W. H. Cutbush	14
5	Orleans Rose	14
6	Edith Cavell	13
6	Else Poulsen	13
8	Eblouissant	12
8	Ellen Poulsen	12
10	Orange King	11
11	Yvonne Rabier	11
12	Perle d'Or	7

Table 22.—DWARF POLYANTHA ROSES.

Position.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.	NAME.	Date of Introduction.	COLOUR.
1	29	15	14	Coral Cluster	1920	Pale coral pink.
1	29	15	14	Kirsten Poulsen	1925	Bright scarlet, shaded gold.
3	27	13	14	Else Poulsen	1924	Flesh pink.
3	27	14	13	Orleans Rose	1909	Vivid crimson.
5	26	14	12	Golden Salmon	—	Golden salmon pink.
6	25	14	11	Mrs. W. H. Cutbush	1906	Bright deep pink.
7	23	12	11	Eblouissant	1918	Rich scarlet crimson.
7	23	13	10	Edith Cavell	1917	Bright cherry crimson with white eye.
9	22	12	10	Ellen Poulsen	1912	Bright cherry rose.
10	19	11	8	Orange King	1924	Vivid orange.
11	17	11	6	Yvonne Rabier	1910	White.
12	9	7	2	Perle d'Or	1896	Nankeen yellow.

SPECIAL AUDIT OF THE NEWER ROSES.

The following varieties are those that have been put into commerce since 1922.

It is always difficult to gauge the value of any new introductions. The plants are propagated to such an extent that they are weakened, and it is often some years before a new variety comes into its own. The Society's New Trial Ground will help. The plants are being grown there under ordinary garden cultivation, and members will receive through "The Rose Annual" a report of them after test and examination by experts.

The voters reside in different parts of the country, and each was asked to place the varieties marked on the Audit Paper in what he considered their order of merit, and to deal in the same way with the Decorative and Climbing Roses.

Table 23.—SPECIAL AUDIT OF THE NEWER H.T.'s.

Position in Audit.	NAME.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen.
1	Dame Edith Helen (1926)	406	208	198
2	Mrs. A. R. Barraclough (1924)	399	206	193
3	Mabel Turner (1924)	326	176	150
4	Captain F. S. Harvey-Cant (1925)	311	160	151
5	Lord Allenby (1923)	286	168	118
5	Mrs. Beatty (1925)	286	121	165
7	Maud Cumming (1924)	264	129	135
8	Shot Silk (1924)	261	122	139
9	Dr. A. I. Petyt (1923)	254	151	103
10	Courage (1923)	249	135	114
11	F. J. Harrison (1924)	214	101	113
12	Mrs. Courtney Page (1923)	208	118	90
13	Lady F. Stronge (1925)	186	82	104
14	Clara Curtis (1923)	135	84	51
15	Mabel Jackson (1924)	133	57	76
16	David Gilmour (1923)	115	58	57

Table 24.—SPECIAL AUDIT OF THE NEWER DECORATIVE ROSES.

Dwarf Varieties.			Climbing Varieties.		
Position in Audit.	NAME	Number of Votes.	Position in Audit.	NAME	Number of Votes.
1	Shot Silk (1924), H.T.	27	1	Allen Chandler (1924), H.T.	26
2	Angele Pernet (1924), Pernetiana	24	2	Climbing Mme. Butterfly (1925), HT. ...	25
2	Mrs. A. R. Barracrough (1924), H.T. ...	24	2	Phyllis Bide (1924), H. Poly. ...	25
4	Dainty Bess (1926), H.T.	17	4	Chastity (1924), H.T.	22
4	C. P. Kilham (1926), H.T.	17	4	Climbing Los Angeles (1923), H.T. ...	22
6	Dame Edith Helen (1926), H.T. ...	15	6	Mary Wallace (1926), H.T.	19
7	Margaret McGredy (1927), H.T. ...	14	7	Climbing General McArthur (1923), H.T.	15
8	Florence Izzard (1923), H.T.	11	8	Thelma (1928), H. wich.	14
8	Gwynneth Jones (1925), H.T.	11			
8	Ivy May (1927), H.T.	11			
11	Lady Roundway (1923), H.T.	10			
12	Mrs. G. A. van Rossem (1927), H.T. ...	9			
12	Mrs. Beatty (1925), H.T.	9			

Table 25.—SPECIAL AUDIT OF THE NEWER ROSES.**Exhibition and Garden.**

Position in Audit.	NAME	Number of Votes.
1	Mrs. A. R. Barracrough (1924), H.T.	26
2	Dame Edith Helen (1926), H.T.	23
3	Mrs. Beatty (1925), H.T.	20
3	Shot Silk (1924), H.T.	20
5	Captain F. S. Harvey-Cant (1925), H.T. ...	19
6	Maud Cumins (1924), H.T.	18
7	Dr. A. I. Petyt (1923), H.T.	14
8	F. J. Harrison (1924), H.T.	12
8	Lady F. Stronge (1925), H.T.	12
10	Margaret McGredy (1927), H.T.	11
11	Mabel Turner (1924), H.T.	10
12	C. P. Kilham (1926), H.T.	9
12	Mrs. Courtney Page (1923), H.T.	9

The Voters.

Amateurs.—Mr. S. W. Burgess (Kent), Mr. H. R. Darlington (Middlesex), Mr. J. G. Glassford (Lancashire), Mr. F. Glenney (Cambs.), Mr. J. N. Hart (Middlesex), Mr. James Kerr (Scotland), Mr. Norman

Lambert (Yorkshire), Mr. Lewis Levy (Kent), Mr. Oliver Mee (Cheshire), Mr. George Marriott (Notts.), Mr. W. E. Moore (Middlesex), Mr. B. W. Price (Gloucester), Major A. D. G. Shelley (Surrey), Mr. W. Sunderland (Yorkshire), Mr. C. C. Williamson (Kent).

Nurserymen.—Mr. F. S. Harvey-Cant (Essex), Mr. W. E. Chaplin (Herts.), Mr. E. Doncaster (Cambs.), Mr. W. Easlea (Essex), Mr. W. E. Harkness (Herts.), Mr. E. A. Jefferies (Gloucester), Mr. H. Morse (Norfolk), Mr. O. Murrell (Salop), Mr. J. Cranfield-Parker (Essex), Mr. George Prince (Oxford), Mr. R. W. Proctor (Derby), Mr. T. Robinson (Notts.), Mr. F. Spooner (Surrey), Mr. G. M. Taylor (Scotland).

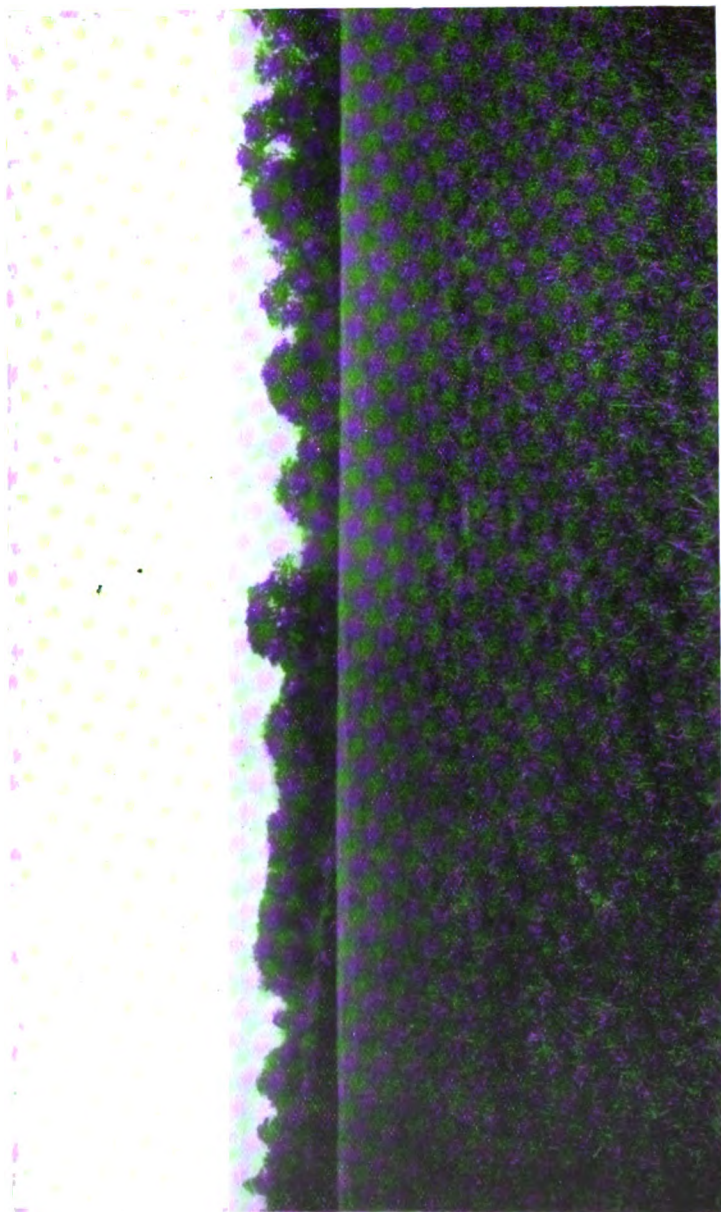


THE TRIAL GROUND.

The Trial Ground of the National Rose Society which was sanctioned by the members at the Annual Meeting in January, 1928, is now in being, and it behoves us all to co-operate to make it a great success.

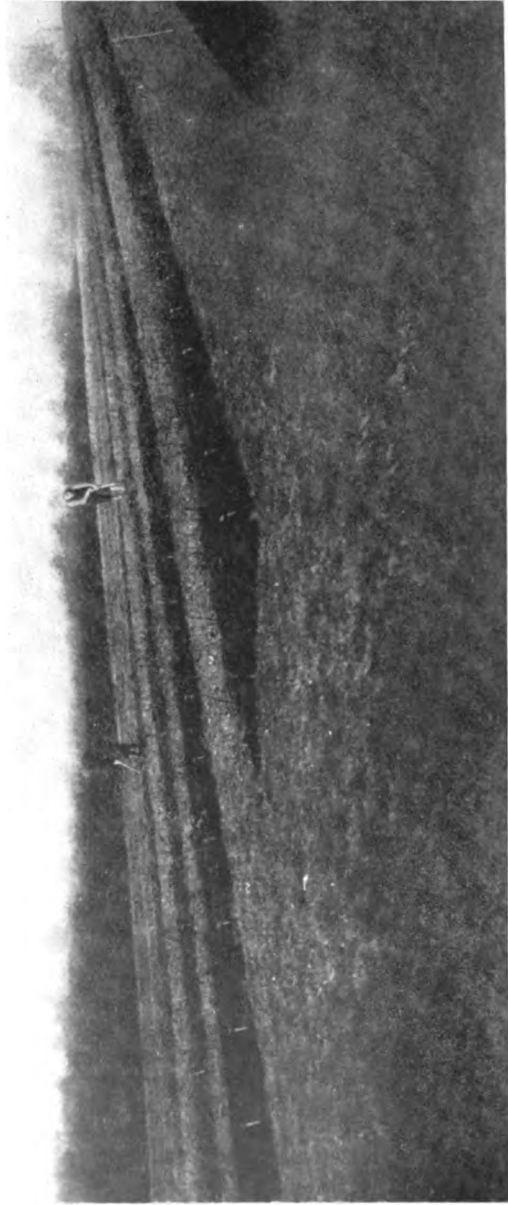
Many of the British and Continental Nurserymen who are members of the Society have already done their share towards making a good start by sending us plants of their newest seedling Roses, most of them being varieties which are not yet in commerce. The total number of plants received is 2,130, and the number of varieties about 252. The following firms have submitted plants for Trial :—

ARCHER, W. E. B., & Daughter, Sellindge, Kent.
BARBIER, RENE, 16, Route d'Olivet, Orleans, France.
BECKWITH, GEORGE, & SONS, The Nurseries, Hoddesdon, Herts.
BECKETT, H., Reliance Nurseries, Upton, Glos.
BEES, LTD., Sealand Nurseries, Chester.
BERNAIX L'FILS, Villembanne-Lyon, Rhone, France.
BIDE, A. R., & SONS, Alma Nurseries, Farnham, Surrey.
BURRELL & CO., Howe House Nursery, Cambridge.
BURGESS, S. W., Red Roses, Tonbridge, Kent.
CANT, FRANK, & CO., Braiswick Rose Gardens, Colchester.
CHAMBARD, C., 26, Place Tolozan, Lyon, France.
CHAPIN BROS., Royal Nurseries, Waltham Cross.
CUTBUSH & SON, The Nurseries, Barnet, Herts.
DOBBIE & CO., Royal Seed Establishment, Edinburgh.
DOT, PEDRO, 7, Riera de la Salut, St. Felin, Llobregat, Spain.
EASLEA, W., & SONS, Danecroft Rosery, Eastwood, Leigh-on-Sea.
FERGUSON, W., 6, Chalmers Street, Dumfermline.
GAUGARD, JEAN, à Parilly, Venissieux, Lyon, France.
GILLOT, F., 60, Chemin de St. Priest, Lyon, France.
GUILLLOT, P., 11, Chemin de St. Priest, Lyon, France.
GREENS, LTD., Norfolk Nurseries, Dereham.
HICKS, ELISHA J., Hurst, Twyford, Berks.
HILL, E. GURNEY, Richmond, Ind., U.S.A.
HOWARD & SMITH, Los Angeles, Cal.
KETTEN, FRERES, Luxembourg (Grand Duchy).
KORDES, WM., Sparrieshoop (Holstein), Germany.
LAMBERT, PETER, Trier ad, Mosel, Germany.
LEENDERS, M., & Co., Rosenkulturen, Stey, 19, Tegelen, Holland.
LILLEY, G., The Rose Gardens, Cippenham, Middlesex.
MATTOCK, JOHN, New Headington, Oxford.
MCGREDY, S., & SON, Royal Nurseries, Portadown, N. Ireland.
MORSE, H., & SONS, Eaton Nurseries, Norwich.



THE TRIAL GROUND, JULY 1928.





THE TRIAL GROUND LOOKING NORTH, JANUARY 10TH, 1929.

NONIN, P., 20, Avenue de Paris, Chatillon-sur-Bagneux, France.
PEMBERTON, J. H., Havering, Romford, Essex.
PRINCE GEORGE, Longworth, Berks.
PRIOR, W. D., & SONS, Colchester, Essex.
REYMOND, L., Rue Frédéric-Fays, Lyon, France.
ROBINSON, THOMAS, Porchester Nurseries, Nottingham.
SMITH, F. PERCY, Boston, Lincoln.
SMITH, T., & SONS, Stranraer, N.B.
SMITS, JAC, Nurseries, Naarden, Holland.
TESCHENDORFF, VICTOR, Cossebaude, Dresden, Germany.
VAN ROSSEM, G. A., Naarden, Holland.
WHITEHEAD, T. M., 24, Tower Street, Selkirk.

•

Members will appreciate that many of these Seedling Roses represent a great amount of expenditure of work and money on the part of the raiser, and, if there were any leakage of buds or otherwise from the plants entrusted to the Society, grave injustice and injury would be done to those who are supporting the Society, the supply of new Seedling Roses not yet in commerce would be discontinued, and the whole object of the Trial Ground defeated. Accordingly, the Council has given an undertaking to the raisers concerned that every care shall be taken to secure the safety of their new productions, and various appropriate measures have been taken with that object, e.g., the identification of varieties by numbers only.

May we appeal to every individual member to assist the Council in carrying out the honourable understanding with the raisers, and facilitate the exclusion of strangers from the Trial Ground by observing the few simple rules which have been laid down for visits by members? These regulations do not originate from any love of red tape, on the contrary, the Council desires that members shall have every opportunity of inspecting the Society's Trial Ground, but, obviously, those in charge can know only a small proportion of our 15,000 members personally, and arrangements must be made which shall apply equally to all. The following rules have been made for visits during 1929, and the Council will carefully consider any suggestions for 1930, which will be for the convenience of members generally and consistent with "safety first."

- (1) Admission is restricted to members of the Society only and by permit for a fixed date.

- (2) Permits (which are not transferable) should be applied for to the Hon. Secretary, 28, Victoria Street, S.W.1, at least seven days beforehand.
- (3) Permits will be issued for Saturdays and Wednesdays, from June 15th to September 28th, between noon and 5 p.m., except for days coinciding with Shows of the Society.
- (4) Each visiting member will be required to sign the Visitors' Book.
- (5) No dogs allowed.
- (6) No Roses, buds, plants or parts of plants must under any circumstances be taken from the Trial Ground.

Whilst many members will no doubt take an opportunity of visiting the Trial Ground, it is confidently hoped that all will derive some benefit from its establishment through the publications of the Society. It is proposed that the plants shall, during the growing season, be inspected at frequent intervals by a special Committee, who will keep a record of their progress and particular qualities from which summaries will be compiled and communicated to members through the *Rose Annual*. Hitherto, we have had to rely for our information as to the good and bad features of the newest Roses mainly on the descriptions of the raiser, and as we all love our own babies best, these have tended to be on the optimistic side, and sometimes disappointment has resulted. In future our members will have at their disposal accurate and impartial accounts of the qualities of new Seedling Roses under average garden conditions, and be informed of their bad as well as of their good points. It is intended to make a special award of a First Class Certificate to those Seedling Roses which are considered worthy after an extended test in the Trial Ground. These awards will be quite independent of the Society's Gold Medal and Certificate of Merit, which latter are granted for outstanding qualities of blooms of new Seedling Roses as staged at a Show, with such slight assistance as the Judges can derive from inspection of the one plant taken from the open ground which must form part of the exhibit. The new awards will be based on the qualities of the new variety as proved under actual garden cultivation.

This new undertaking of the Society starts under excellent auspices. First and foremost, the Trial Ground adjoins the residence and garden of Mr. Courtney Page, so that we shall have the inestimable advantage

of practically continuous supervision by our enthusiastic and experienced Honorary Secretary. Secondly, the soil, whilst being a fair Rose soil, is by no means of such superexcellence as would produce results out of the ordinary. The ground has been pasture for many years. It has a subsoil of clay with about two feet of a greasy loam, in some places sandy clay, both being of rather a light colour. Thirdly, the site is very suitable, having a gentle slope to the South and West, and it is well exposed to rain and wind, having only very slight shelter by distant woods and high hedges.

The situation of the Trial Ground is at Haywards Heath, on the Haywards Heath-Lewes Road, adjoining Messrs. Charlesworth's Orchid Nurseries, and about ten miles from the sea. The altitude is 240 feet above sea level, and the area of the land is about six acres, of which at present about one acre has been planted.

The beds, which are arranged in long rows, are 6 ft. wide by 150 ft. long, with intersecting cross paths. These grass paths are 6 ft. wide, with the exception of the centre path, which is 12 ft. The object of this layout is that when the soil in the present beds begins to get at all Rose sick, they can be converted into paths, the present grass paths being made into new beds, thus involving a minimum of labour and expense, and no interference with the then existing arrangements of the remainder of the ground.

It is confidently anticipated that our new venture may prove useful and interesting to all our members, and that the few who have opposed it in the past may be speedily converted ; but do not let us make the mistake of putting our expectations too high, or of claiming infallibility. A new seedling which does poorly at the Trial Ground may produce some wonderful blooms in the hands of skilled exhibitors ; a plant of stunted growth at Haywards Heath may flourish in the shelter of a South wall ; and a new Rose which is a failure in the South may yield good results in Scotland or the North of England. For these and many other reasons the tests at the Trial Ground can never supersede the awards of the Gold Medal or the Certificate of Merit. What we do hope to achieve is to give our members reliable guidance on the result of growing the newest Roses in a fair average Rose soil, in a reasonably suitable position and under ordinary good cultivation.

FRANK CANT, J.P.

The National Rose Society has lost one of its oldest and best-known figures, and many of its members have lost a very old personal friend in the passing of Mr. Frank Cant, founder of the distinguished firm of Rose growers, who, although not actually the senior, was the last of that little band of pioneers of the National Rose Society who did so much for the Rose in the late seventies and early eighties.

Born in 1857, Mr. Cant carried his 71 years remarkably well, his strong physique and able virile mind suggesting a much younger man.

He was one of our keenest exhibitors, and with very few exceptions his familiar figure was a feature of the Summer Shows, both in the Metropolis and in the provinces.

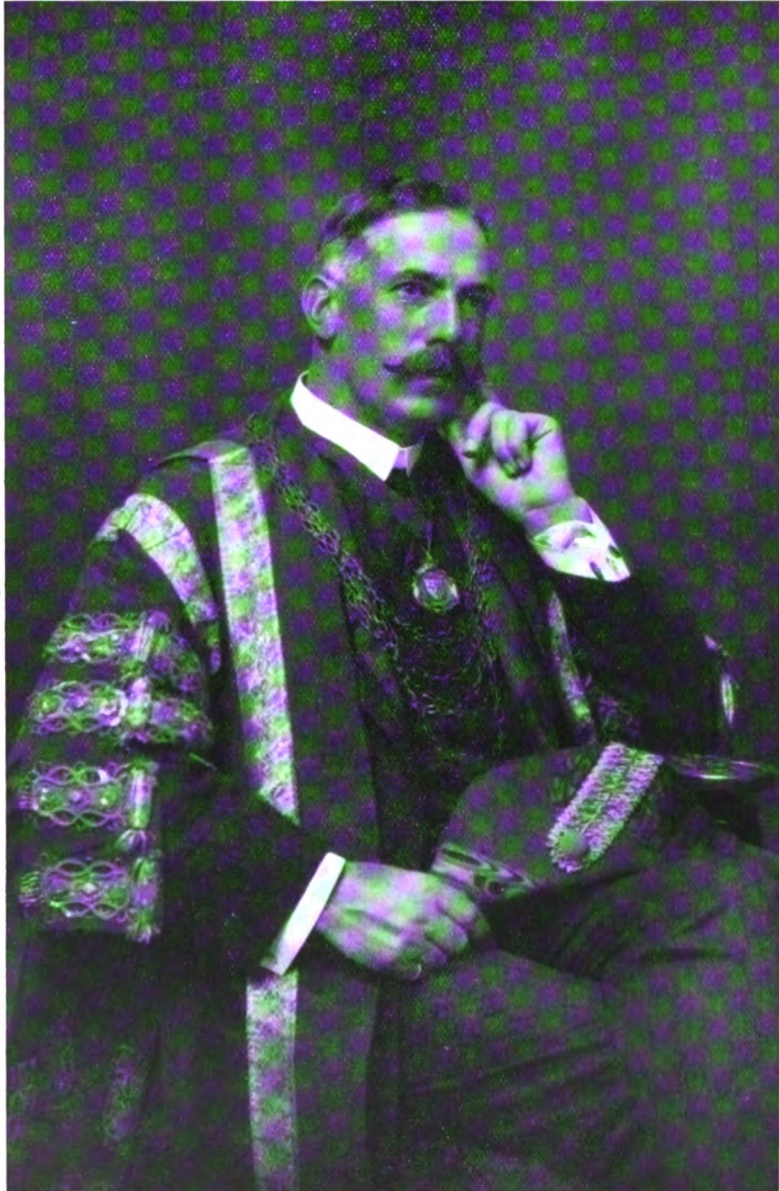
He was an authority on all questions connected with the Rose, and few were better acquainted with the older varieties—which he loved—although so many of them have passed out of existence.

As a judge he was second to none, and although in his becoming modesty he did not claim to be infallible, no decision was open to less criticism.

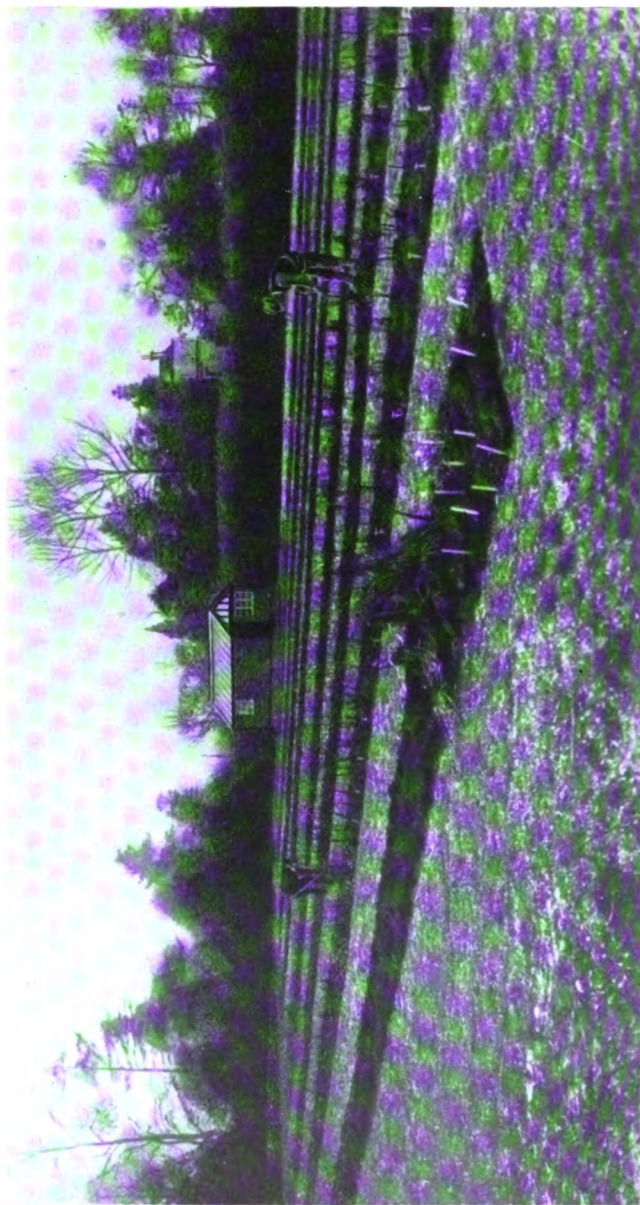
For many years he was a Member of the Council of the National Rose Society, and took a very keen and active part in the management of its affairs.

He was a lively, fearless, and interesting debater, and a most versatile and sociable companion, with a large circle of friends and acquaintances all over the country—one might almost say the world—and when saying good-bye to him just before he died, he asked me to give his very kindest thoughts to all his old friends, and say that meeting them at the Shows year after year had been one of the greatest pleasures of his life.

It is pleasing to know that the business will be carried on by his two sons, Sydney and Clifford Harvey-Cant, who for the last 25 years could have had no better tutor in the crafts of Rose production than their dearly-loved father.—COURTNEY PAGE.



THE LATE FRANK CANT, J.P.



THE TRIAL GROUND LOOKING SOUTH, JANUARY 10TH, 1929.

NOTICE TO MEMBERS.

The Publications Committee would welcome short papers, or notes, on any subject that might be thought of interest to Rose Growers generally.

There must be many little facts and problems that come under notice during the year that would be of interest to other Rosarians, and the Publications Committee would be glad to make the *Rose Annual* the medium.

Photographs of outstanding Rose subjects, too, would be most useful.

Cheltenham's Arboreal Beauty.

For over a century the output of our Nurseries has enriched almost every Public and Private Park, Roadway, Estate and Garden in Cheltenham and district, and we now offer for general distribution a wealth of superbly grown Standard and Bush Flowering Trees and Shrubs, and over 50,000 beautiful Cheltenham Roses.

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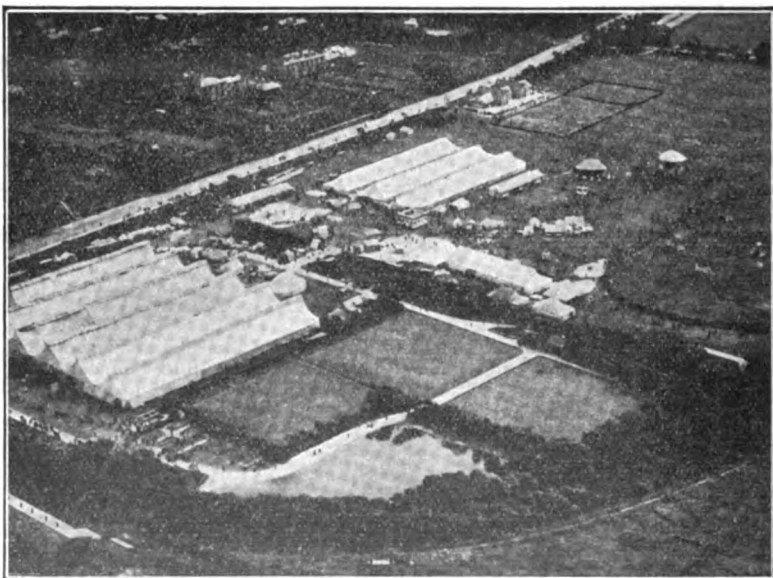
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PRICES { 7-lbs. 14-lbs. 28-lbs. 56-lbs. 1-cwt.
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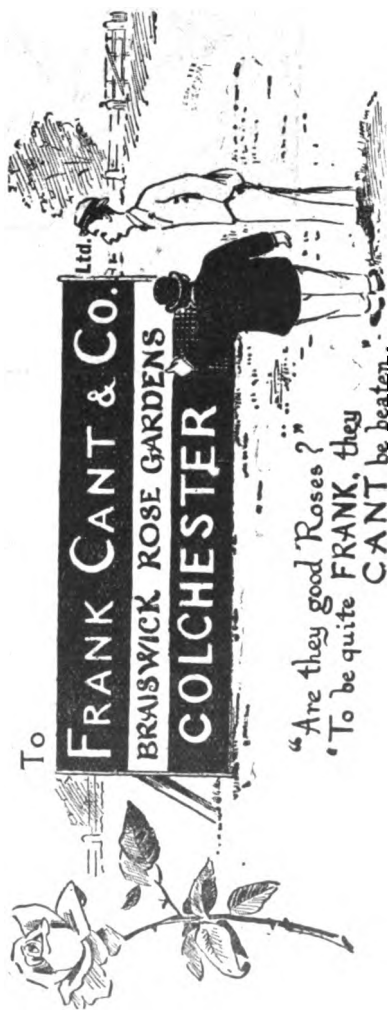
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The late respected Mr. R. de Escofet wrote when living in London:—"Since planting my Roses in your Loam I have had excellent results, considering I grow my Roses within four miles of Charing Cross. I have won 3 Challenge Cups, 8 Firsts, 3 Seconds and 2 Medals for best blooms at four shows only."

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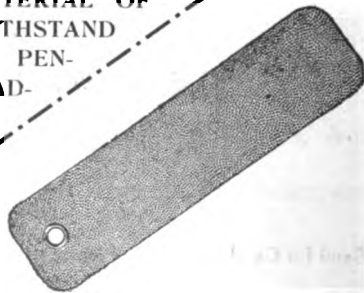
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Suitable for centres or borders of Lawns, etc.

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 Francois Jouranville
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 Maxim Corbon
 Paul Transon
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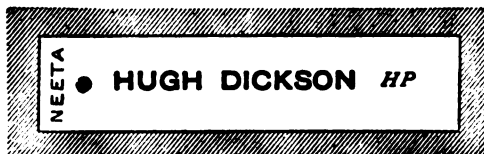
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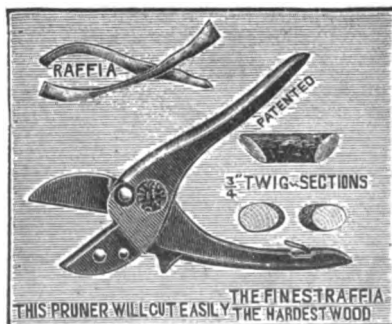
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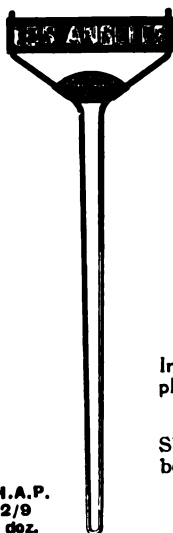
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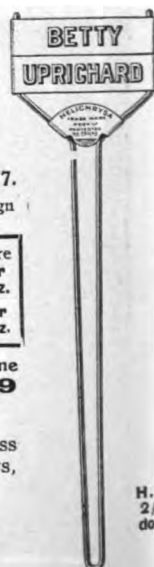
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By the word "**STURDY**"
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STRONG	GROWTH
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TRUE	TO NAME
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COME AND SEE THEM GROWING
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**EXCELLENT POLYANTHA ROSES
OF THE VERY BEST VARIETIES**

BY ROYAL



APPOINTMENT.

DICKSON'S "HAWLMARK"
NEWTOWNARDS, Co. DOWN,
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***British Grown Roses for every
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**Our Gold Medal Roses
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they are grown on land specially
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 of strong, hardy, well matured trees,
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**We use selected Briar Stock *only*
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Four Free Flowering Fragrant New Roses.

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Bright geranium red, developing to glowing rosy-cerise. Combines strikingly brilliant colour, wonderfully sweet fragrance and strong healthy growth. Experts unhesitatingly state that it is the best novelty seen of recent years. A truly superb rose and one that will be universally grown. Awarded Clay Cup for best scented new rose of the year. Gold Medal, N.R.S., Gold Medal, R.A.S., etc.

CANARY (H.T.)

Light golden yellow developing to canary yellow. One of our best introductions and the yellow bedder of the future. Resembles shot silk in growth and foliage, but rather more vigorous and with a few more petals. Sweetly scented. An excellent rose in every way and recommended with the greatest confidence.

SWANSDOWN (H.T.)

White, handsome, large, shapely flower. Exceptionally free healthy growth (Ophelia type) delicious fragrance. An all round rose of the greatest merit and one that is much needed.

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Salmon-cerise over golden yellow, deeply veined and shaded. A fine flower, upright free growth and rich fragrance. A striking and unique novelty, combining distinctiveness and utility.

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Cake or liquid, in bottles and tins for 1,000, 2,000, 5,000, 10,000, 20,000, 40,000 and 80,000 cubic feet of space.

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No apparatus required, in cartons for 1,000, 2,500, 5,000 and 10,000 cubic feet of space.

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For Mildew on Roses and Fruit Trees.

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Souvenir of the Old Rose Garden

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Firm who made Colchester famous for Roses—

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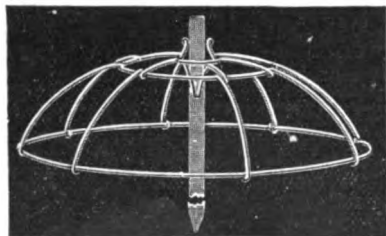
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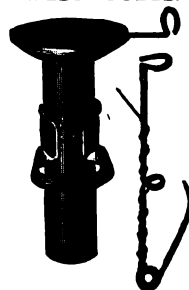
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WEST TUBES.



Complete ... 14/- Doz.
 Tubes only ... 8/- "
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Are cultivated in fields exposed to the sea air, the soil second to none in this famous Rose County.

We have pleasure in announcing the following

NEW PEDIGREE SEEDLINGS of 1928

APHRODITE (H.T.)—A charming decorative Rose; colour reddish coral with gold base. Semi-double. Very fragrant and wonderful foliage, which is disease proof. Cannot fail to please. Grand Autumnal.

IVANHOE (H.T.)—Brilliant scarlet to rich crimson. Very prolific, fine shapely buds. Splendid bedder and deliciously fragrant.

MRS. HERBERT DOWSETT (Pernetiana)—A sport of Los Angeles. The flowers are similar in size to Los Angeles, but several shades deeper in colour.

RUPERT BROOKE (H.T.)—Fawn pink to creamy flesh. Very profuse flowering. Large clusters of perfect flowers. Grand bedder.

WM. E. NICKERSON (H.T.)—Rich, glowing orange cerise, in the way of Lady Inchiquin, but a sturdier grower. Flowers large, of exhibition type.

OUR NOVELTIES OF 1927.

AMAMI (H.T.)—Soft peach pink. Flowers of immense size, not too double. Magnificent upright grower.

EVEREST (H.T.)—The largest Rose yet raised. Colour white, suffused yellow; sometimes the yellow shade very intense. Very vigorous, almost a climber. Grand for exhibitors. Gold Medal N.R.S. 1927.

THELMA (Hyb. Wich.)—A great acquisition. Delicate coral pink. Flowers large for its class. Beautiful foliage. Awarded "Cory Cup" 1926.

W. A. BILNEY (H.T.)—A most artistic Rose that all lovers of garden Roses will welcome. Colour primrose and crushed strawberry. Huge flowers, freely produced.

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Full of useful information. A Client writes: "*It is the best Catalogue I have ever seen.*"

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The ROSES we grow
Are as good as we claim them to be*

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NOTHING BUT 1st SIZE PLANTS
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Lists ready in September

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Especially interesting are
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fashioned Roses, which
are yet unequalled for
Scent.

GEORGE BUNYARD & Co., Ltd.
The Royal Nurseries,
Maidstone.

ESTABLISHED 1796.



You will, I hope, forgive my questionable method of arresting your attention. The question itself is really one of moment to you



Do you know this Booklet?

If you know it, there is no question at all about it; you send for your copy every autumn and wouldn't settle your new list without it.

If you don't know it, and have only heard about it, won't you see for yourself why the Rose world is saying such uncommon kind things about it?

Let me admit in advance there is nothing clever in it—it simply blurts out the truth about every Rose described, details all its faults, and compares the new variety with the older one supposed to be cut out.

You see yourself, nevertheless, this is the very help you want in selection. We are all a little tired of the too-good-to-be-true-description, but a description too true to be all good really tells us just what we want to know.

"My Favourite Roses and Why" is a text book to give any beginner confidence, but it aims to be a YEAR BOOK and a ROSE ANNUAL, that will keep an expert up to date.

Of course it is a Catalogue, too—it wouldn't be free and post free if it weren't; but don't hesitate to write for it because you can never send me an order—if I may say so—it isn't your order I'm after, it is your appreciation.

If you think as well of it as your brother members of the N.R.S. you are sure to show it to some should-be Rose grower, and between us we make another convert.

R. MURRELL, Roseacre, Shepperton-on-Thames.

BY ROYAL



APPOINTMENT.

S. McGREDDY & SON'S NEW ROSES for 1929

We offer the following New Seedling Roses with our strongest recommendation. They are distinct and different from any other varieties on the market, and all have been carefully tested in England, Ireland and America, and we are confident they will give pleasure to Rose lovers the world over.

STRONG GROUND PLANTS of all the following in Autumn, 1929, 5/- each. **STANDARDS** and **HALF STANDARDS** on Briar 10/6 each. **STANDARDS** and **HALF STANDARDS** on **RUGOSA** 8/6 each. **STRONG POT PLANTS** in JUNE 21/- each. **RETAIL CATALOGUES** **POST FREE.**

WHOLESALE LISTS TO NURSERYMEN ON APPLICATION.

Mrs. SAM McGREDDY (H.T.)

This is the second Rose that we have selected to bear the family name, and, like "Margaret McGredy," we predict as great a future for it.

The colour is quite distinct from anything yet seen in Roses, a wonderful dual combination of vivid shades. A beautiful scarlet coppery orange is heavily flushed with Lincoln red on the outside of the petals, and these colours together give a rich and almost dazzling effect. They are particularly brilliant in sunshine, which seems to illumine the flower, and a bed of this variety in full bloom, seen under favourable conditions, is a wonderful sight. It has been one of the most conspicuously beautiful Roses in our fields for years.

The flowers are of large size and beautiful form, and they possess the proper fullness to make them useful for all purposes. They are very freely produced and delicately perfumed.

The foliage is a handsome dark reddish bronzy-green and mildew-proof, the stems are very long and strong—not thorny, and the blooms erect. The plant has a vigorous and exceptionally free habit.

As a garden and bedding Rose this variety will excel "Mrs. A. R. Barraclough" in popularity, and we are confident that it is a Rose that cannot fail to please. It is for all Rose growers the best "all purpose" variety we have raised.

Awarded the Certificate of Merit of the National Rose Society.

McGREDDY'S IVORY (H.T.)

There are few Roses that possess a long, spiral form in the bud stage and large, well-formed fully developed flowers of thick petalage and good lasting qualities. Our well-known white variety, "Mrs. Herbert Stevens," when well-grown is one, and its worth has been proved by its long run of popularity. In "Portadown Ivory" we have a novelty that excels "Mrs. Herbert Stevens" at its best, without the latter's pendulous habit.

The colour is a creamy white of soft and delicate tone that merges into a light yellow base and gives a colour combination not unlike that in the well-known Sweet Pea, "Ivory Picture."

This Rose is free and perpetual flowering, and as a garden, bedding and exhibition variety it should supply a long-felt want in a colour section that has been neglected during recent years.

The foliage is a very dark green, which provides a vivid contrast to the pale-hued blooms, which are borne erect on long, stout stems.

It has a vigorous constitution, a very free habit, and we recommend it with every confidence as the best all-round Rose in the light shades.

Awarded the Gold Medal of the National Rose Society.

LADY LESLIE (H.T.)

Some critics of modern Roses bemoan the loss of fragrance at the expense of vivid colours. In some cases this is justified, but in "Lady Leslie" we have brilliant and pleasing colours and a pronounced fragrance. It is one of the sweetest of our seedlings, and we feel sure that it will become a most useful and attractive decorative variety.

The colour is rosy scarlet in the early stages, developing into scarlet-carmine suffused with saffron yellow on a yellow base. Those who know the beautiful colours of many of the Charm Dahlias, most of them superimposed on yellow bases, will be able to judge the richness of tone in "Lady Leslie" and imagine its pleasing effect either in sunshine or lamplight. There is a rich, warm glow, especially in the young flowers.

The blooms are beautifully formed, generally of average size, but occasionally large enough for exhibition. The plant is of the best bedding type, with free, upright, bushy growth, and the foliage is dark green and mildew-proof. The stems are strong, bearing the blooms upright, and there are few thorns. A Rose that we specially recommend for amateurs on account of its vigour, ideal habit and exceptional fragrance.

Awarded the Certificate of Merit of the National Rose Society.

PORTADOWN BEDDER (H.T.)

This is one of those brilliant Roses that makes an instant appeal by reason of its arresting, and at the same time, charming combination of unusual colours.

The petals are orange-yellow on the outside, with a rich cerise flush that deepens towards the edge, and inside there is a suffusion of glowing scarlet-cerise on an orange ground. The blend of colours gives a warm tone to the whole flower.

The blooms are of a moderate size, good form and thick texture of petal. They are very freely and continuously produced, and are fragrant.

As a bedder this variety will be in great demand, for in addition to its novel and pleasing colour, it has all the attributes of an ideal decorative Rose, possessing dark green mildew-proof foliage, strong stems with few thorns that carry the flowers erect, and a free, bushy habit. Altogether a delightful garden Rose which has only to be seen to be admired.

Awarded the Certificate of Merit of the National Rose Society.

NOTE.—This variety is illustrated in colour in the National Rose Society's Annual for 1927. p. 206.

BETTY SUTOR (H.T.)

There have been many introductions during recent years described as improvements on "Mme. Abel Chatenay," but after careful comparisons we have found none of these has justified the claim. In "Betty Sutor," however, we believe we have produced a new Rose that is a great advance on the old favourite.

The inside of the petals is pale rosy pink, heavily veined with rose and the outside a bright rosy pink. As the flower opens there is that delightful reflexing of the petals which enhances the beauty of the pink tones by bringing each into bolder relief.

The blooms are moderately large and of exquisite form; they are freely produced throughout the entire season.

This Rose has a wonderfully free and bushy habit and strong, upright growth. The foliage is dark green, the stems are stout, holding the flowers erect, and there are few thorns.

The flowers have a delicate "tea" perfume.

We believe that this novelty will take a leading place among pink Roses, and we recommend it with confidence.

**STRONG POT GROWN PLANTS OF ABOVE VARIETIES WILL BE READY
IN JUNE, 21/- each.**

STRONG DWARF OPEN GROUND PLANTS IN AUTUMN, 5/- each.

STANDARDS and HALF STANDARDS on BRIAR, 10/6 each.

STANDARDS and HALF STANDARDS on RUGOSA, 8/6 each.

**Over 800,000 Roses grown annually on the best stock English Briar
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Roses for every purpose can be had from us. Illustrated
ROSE AND GENERAL CATALOGUE POST FREE.**

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S. MCGREDY & SON

ROYAL NURSERIES, PORTADOWN (NORTHERN IRELAND).

(SEE ALSO PAGE 316)

An Invitation

To all Members of the National Rose Society
and their friends, we extend a cordial invitation
to inspect our

**SURREY GROWN ROSES, FRUIT TREES,
ORNAMENTAL TREES, SHRUBS, etc.**

*Our Nursery is situated between Guildford and Farnham, on
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PLANT SMITH'S HARDY SCOTCH GROWN GOLD MEDAL ROSES

Unsurpassed for Vigour and Good Roots

Two Medals London, 1928

Rose Growers for nearly three quarters of a century

New White Scented Gold Medal Rose

MARGARET ANNE BAXTER

Dwarfs **3/6** each Standards **7/6** each

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Fish Manure

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herewith, state that

after many years experience they consider the "ECLIPSE" ideal for ROSES,
either for digging in before planting, or when used as a top dressing.

Obtainable through all seedsmen in tins 1/6; and in
bags, 7 lbs. 2/6, 14 lbs. 4/-, 28 lbs. 7/-, 56 lbs. 12/-,
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Sole Registered Proprietors.

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WILMINGTON **HULL**

SUPPLIERS TO H.M. THE KING

PEMBERTON'S NEW PEDIGREE ROSES

FOR DISTRIBUTION IN 1929.

RACHEL (Hybrid Tea).

Colour orange buff, flushed carmine. Form large full pointed Flowers, carried erect. Foliage dark green, growth very vigorous and free flowering from early summer to late Autumn. Price 5/—.

FORTUNA (Hybrid Musk).

A perpetual flowering Cluster Rose, colour soft china pink, semi-single, blooms 4½ inches across, growth dwarf shrub, bedding, fragrant, good in Autumn. Price 5/—.

CHAMI (Hybrid Musk).

A perpetual flowering Cluster Rose, colour bright rose pink, yellow stamens, semi-single, produced in corymbs, large sprays, bush habit, bedding, very strong Musk perfume, good in Autumn. Price 5/—.

All ground plants in Autumn.

NEW ROSES OF 1928.

FELICIA (Hybrid Musk).

A perpetual flowering cluster Rose, colour china pink, shaded yellow, very fragrant. Flowers produced in large clusters, carried erect, rosette form. Good in Autumn. Price 3/9.

IRIS PATRICIA GREEN (Hybrid Tea).

Colour cherry red, long pointed bud, foliage dark green, very free flowering, good bedder, blooming continuously well into the Autumn. Fragrant. Price 3/9.

E. PEMBERTON BARNES (Hybrid Tea).

Colour light pink, shaded cerise. Blooms large and full, suitable for specimen blooms and bedding. Growth vigorous. Price 3/9.

**Descriptive List of other Seedling Roses raised by J. H. PEMBERTON, and
General Catalogue free on application.**

Address— **J. H. PEMBERTON,**
Havering-atte-Bower,
ROMFORD, Essex.



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you have the
Original
**Darlington's
Auto-Shreds**



Burns on the
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No apparatus
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AUTO-SHREDS

are as Necessary as Glass in a Glasshouse

because, although they bring life and beauty to your plants, they mean certain death to pests. Each tiny Shred contains highly concentrated fumigant.

Just heap the Shreds on the floor, light them and walk away—in a short time your plants will be thoroughly fumigated. Professional Growers and Amateurs alike are enthusiastic over "AUTO-SHREDS," and horticultural journals are constantly praising them. Buy a packet TO-DAY, but beware of imitations. Nurserymen, Seedsmen, Florists, and Stores sell the Original

Darlington's Auto-Shreds Fumigant

SIMPLY LIGHT AND WALK AWAY

Sold in packets only, with directions thereon.

No. 1	Packet, to fumigate 15/20,000 cubic feet	.. ..	6/- per packet
No. 2	" " 10,000 "	.. ..	4/6 "
No. 3	" " 1,000 "	.. ..	1/- "
No. 4	" " 2,500 "	.. ..	1/6 "

Nos. 1, 3 and 4 are for delicate and ordinary Plants.

No. 2 is for ordinary foliaged plants only.

Whole or part packet can be used, as desired.

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ONLY BRITISH GROWN ROSES.

RAISERS OF THE "DAILY MAIL" SCENTED ROSE

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Rich, Dark Velvety Red with
the Old Rose Scent

DAINTY BESS

The Artistic Single Rose

JOYOUS CAVALIER

Vigorous ever blooming Scarlet Rose

NOVELTIES, 1929

MURIEL

Brilliant Red

MAID OF KENT

Shell Pink, Fragrant

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Rose Nurseries,

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Will Thrive on all Soils in all parts of the Country, as they are Hard, Well-grown Trees.

*We have a large collection of all the best Roses.
We only grow those varieties worth cultivating.*

NEW SWEET SCENTED CRIMSON ROSE BEDFORD CRIMSON

This grand Rose was awarded the Clay Challenge Cup at the R.H.S., for the **BEST NEW ROSE** with a true **Old ROSE SCENT**. It is undoubtedly the best Crimson Rose yet raised, as it has all the good points which go to make a perfect Rose. It has on an average about forty petals. The blooms are a beautiful velvety crimson reflexed and carried on long stiff stems. It does not turn magenta and keeps its colour when it is fully developed. It is also very free blooming.

Bushes 2/6 each, 24/- per dozen. Standards 6/- each.

LAXTON BROTHERS Ⓞ BEDFORD

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We are the leading house for all kinds of Tags and Labels, and are the original Patentees of the Self-Fastening Tag Label

We strongly recommend our

**WATER PROOF
TREE TICKETS**
BURALL BROS. LABEL SPECIALISTS. WISBECH, ENG.

WATERPROOF TREE TICKETS

They are made of the best material procurable and have withstood severe tests in all weathers.

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ROSE CATALOGUES

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McGREDY'S MILDEW PREPARATION

A CERTAIN PREVENTATIVE and GUARANTEED CURE for the most worrying and most troublesome “FUNGOID DISEASE” the Rose Grower has to contend with. This Preparation, which we Guarantee, will prevent and cure Mildew on Roses grown outdoors, or under glass, as well as ALL other plants subject to this disease; it will also prevent and cure Black Spot on Roses.

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15/5/28.

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The finest scientifically prepared Rose Food on the market. This is the Rose Manure we ourselves use.

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THE ABOVE PREPARATIONS ARE MANUFACTURED ONLY BY US.
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NURSERYMEN, SEEDSMEN AND FLORISTS TO H.M. THE KING.

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(SEE ALSO PAGES 308 and 309.)

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Every plant sent out from our Nurseries has been grown solely with the view of giving complete satisfaction to the purchaser, and no plant that does not reach our high standard of excellence is ever sent out.

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Safe and effective for Moss, Weeds, etc. Can be used where there are domestic animals, poultry, etc. Pint 1/6; quart 2/6; $\frac{1}{2}$ -gall. 4/-; gall. 6/6; 1 gall. makes 26.

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Give a perfect spray, which may be varied from fine to medium or coarse, as desired. Last a lifetime. Specially recommended by the National Rose Society. No. 4 (1 x 14) 16/4, No. 5 (1 x 20) 21/-, No. 6 (1 x 20) 26/-; Bend for spraying undersides of leaves not included, but 1/6 extra.

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